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DISCUSSION.

PHILADELPHIA NEUROLOGICAL SOCIETY,

Stated Meeting of October 26th, 1891.

The President Dr. H. C. WOOD, in the Chair.

A STUDY OF THE INDICATIONS FOR, AND APPLICATION OF, PHYSICAL CULTURE IN THE TREATMENT OF INSANITY AND ALLIED DISEASES.

H. A. TOMLINSON, M.D.,

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WHEN I began the study of this subject two years ago, I found that practically nothing had been written from the standpoint of the influence of physical culture upon the organism as a whole. Like all remedies, the use of which has had a popular origin, it is used either empirically and indiscriminately, and is credited with some occult or mysterious mode of action, or else it is received with an unreasoning skepticism, and all virtue denied it. Physical culture being a remedy, for guidance in the application of which, we must depend upon our knowledge of the ordinary processes of nutrition and general pathological conditions; it therefore becomes necessary to study in a general way the changes which take place in the processes of nutrition, and the nature of the perversions of functional activity of the brain and nervous

system, in the class of cases to which this form of treatment seems applicable, and to build up a working hypothesis which will serve as a guide in the study and application of the remedy.

In hysteria, neurasthenia and all forms of primary insanity except the degenerative, there exists impaired vitality, produced either by excitement and motor disturbance or auto-intoxication, occurring in states of depression as a result of retained products of excessive retrograde tissue change.

The special characteristic of nervous protoplasm is an irritability which it possesses in excess over all other organized forms of protoplasm—and this excess is due to its function in the economy of receiving, collecting and relating external and internal impressions, and guiding and controlling the manifestations of energy which constitute the activities of the organism, while it is, in its turn, dependent for its vitality upon the activities which it guides and controls.

It follows, then, that anything that interferes with the vitality of the general organism impairs the functional activity of the nervous system ; and the nervous function being imperfectly performed, the vitality of the general organism is further impaired. This reaction may continue until the whole organism is exhausted, or it may become excessive in the nervous system, if the primary disturbance is there, and exist in only a comparatively slight degree in the balance of the organism. It is apparent to any one who observes carefully the effect of shock or strain upon the nervous system, that the first effect produced is increased irritability and functional activity, unless the shock has been extraordinary, when the result is immediate paralysis. At the same time nutrition is interfered with, and elimination is hampered ; there results, therefore, to a greater or less extent, impaired general vitality with especially marked impairment of nervous function which may proceed to exhaustion, with entire absence of response to external impression, as we find it in the profound depression of stuporous melancholia or advanced terminal de-

mentia. Again, we may have impaired vitality manifested in the profound general exhaustion which accompanies acute or delirious mania. A further characteristic of this excessive and perverted activity is its tendency to persist, even after the cause has ceased to be active, and sometimes to go on to permanent perversion and extinction of the individual.

Where a sufficiently strong and persistent exciting cause brings about the degree of nervous irritability manifested in the sensory and motor disturbances, which we define as maniacal excitement, the continuance of the excessive activity results, not only in exhaustion of the nerve cell in the cortex and throughout the nervous system, but also indirectly in general impairment of nutrition and failure of power, while if this failure in nutrition reaches a certain point it, in turn, operates to prevent a return of the nervous organization to a normal state of activity, and should the disturbance of general nutrition persist, the sensory and motor disturbances will continue until, if the motor disturbance is the most marked, the patient dies of exhaustion, or if the sensory manifestations are excessive, mental annihilation supervenes, and the individual's existence becomes vegetative. In states of depression the same results ensue from auto-intoxication, but the mechanism is different. Here we have to deal with a sudden inhibition of irritability in the nerve cell and a concomitant general functional depression, or else with an analogous persistent cumulative process bringing about the same result. External impressions cease to be carried to the cerebral centres, or are carried so slowly and are so imperfectly coordinated and related, that the resulting motor manifestation is so retarded and perverted as to be ineffective. Having these conditions to deal with, it follows that the most successful plan of treatment will be that which combines all means that can be brought to bear to improve general nutrition. It has been my experience that, in functional nervous diseases and insanity, the effect of drugs and food in improving nutrition is limited, and although ordinarily efficient they often fail because they do not en-

able the overwrought organism to maintain the balance between, or get ahead of, the waste of vitality going on and the efforts for its repair. Even where the plan of treatment ordinarily followed is apparently efficient, we often want an adjuvant which will accelerate the work. This adjuvant I have come more and more to think we have in physical culture.

As a rule, nutrition increases in a direct ratio with the demand for it, and there is nothing that will create that demand like muscular and visceral activity. Muscles waste from want of use, and visceral function becomes impaired from the same cause, while both suffer in addition from retention of the waste products of their activity. It would seem that in violent disturbance of the nervous system, and in profound depression, all other activities were lessened or suspended in the effort of the organism toward the conservation of energy in the direction of greatest need, and as a result the genetic processes of metabolism are interfered with, as well as the elimination of waste products. Visceral activity can be, in a measure, assisted by drugs and food, acting as stimulants of function, but muscular activity comes only from use, and the nutrition of the muscle increases and at the same time the elimination is aided by the general activity of the vital processes. Another point worthy of attention here is that all functional nervous disturbances tend to travel in waves or cycles, and the tendency toward recovery is at the subsidence of a wave or the completion of a cycle.

If any means can be brought to bear at these periods in the progress of the disturbance that will tend to prevent the genesis of a new wave or cycle, recovery will be without doubt accelerated. This seems, to my way of thinking, the way in which physical culture acts, outside of its mechanical effect, in stimulating the circulation and causing muscular movement. Along with the influence of this adjuvant on the organism as a whole, in improving nutrition and removing diseased conditions, there goes its effect upon the mental processes of the individual. This is produced by the regularity and persistence of its application,

the uniformity and gradual progression of the procedure, besides the condition of *bien être*, which is engendered by the successful accomplishment of muscular effort ; and last, but not least, there is brought to bear the attitude of expectant attention in the patient, replacing his perverted mental activities. Inactivity and seclusion are the necessities of introspection, whereas muscular and visceral activity bring us to a realization of external impressions, with new ideas and trains of thought sinking the *ego* in activities external to the individual.

As a summary of what has been here stated, it seems to me safe to say that physical culture, systematically and progressively applied, is one of the best means at our command for the improvement of nutrition and the furthering of elimination, and that by its method and persistence it tends to check irregular manifestations of nervous energy and to guide them into normal channels of activity. I include under the head of means of physical culture, massage, passive and resistive muscular movements, galvanic and faradic muscular stimulation, systematic voluntary muscular movements and light gymnastics—so called.

Much has been written of the application of massage and electricity to the treatment of hysteria and neurasthenia, and their local use in other diseased conditions, but so far as I know their application to these and other analogous conditions, occurring in connection with insanity, has not been systematically studied from the standpoint of the pathological conditions present, and the influence of motion in altering these conditions and reëstablishing the impaired functional activities on a normal basis. In undertaking the application of physical culture in the treatment of insanity, many difficulties are encountered which do not exist in other forms of nervous disease. These difficulties are inherent in the perverted mental activities of the patient, and generally take the form of suspicion of anything undertaken in their behalf, resistance on account of unwillingness to do anything which would tend to disprove their assertions, of incapacity, or the motor disturbance which accompanies maniacal excitement. These difficulties can, how-

ever, by patience and persistence be overcome, and any necessary procedure carried out if too much is not undertaken at once. Of course there must enter into any undertaking of this kind a presupposed knowledge of the general management of the insane that can not be considered here, but which would be an important factor of success. The plan of procedure which I have found most efficient is as follows: In cases of melancholia, mania, hysterical and neurasthenic insanity I begin with massage, using friction alone or with percussion. This is kept up from one to two weeks, according as the manipulations are well or ill received by the patient. Ordinarily they soon grow to like this procedure and look forward to it. These simple manipulations can then be followed by muscle kneading and passive movements of the limbs. Often this procedure can be combined with stimulation of the skin with the secondary current of the faradic battery through the wire brush, and muscular stimulation with the primary current, using the slow interrupter, and getting from eight to twelve contractions from each group of muscles in turn. It is wise to begin this stimulation in the muscle groups of the lower extremities, as the patient is less apt to be disturbed or alarmed by the operation of the electric current. The galvanic current may be used for the same purpose with an interrupting handle, but I never have found any special advantage from its use, and the battery is certainly more formidable looking and less convenient to use. Passive movements can not often be made with the insane, for even in the extreme dejection of melancholia attonita, or the apparent passivity of stuporous states, there is more or less instinctive resistance. However, this does not materially interfere with the success of the procedure, and after a time, by tact and persistence, most of the resistance can be overcome. The procedures here described are applicable principally to patients in bed and to those who are not well enough, either mentally or physically, to take part in general class work. These manipulations are also very efficient against insomnia and restlessness, and will induce sleep where drugs fail, or, in most cases, will replace drugs en-

tirely. It is true that it takes more time and a more than usually efficient attendant to carry out this treatment, than it does to give a hypodermic of hyocine or a dose of chloral, but it is safer and more apt to be permanently efficient.

Light gymnastic exercises can be taken by the patient, either alone or in company with others, some patients seeming to work better and more willingly when alone, while others do better at class work. It is best to begin with free hand movements, so called, which are very much like the movements an army recruit is put through before he is taught the manual of arms ; the object being to bring the different groups of muscles into play in turn. These movements are capable of considerable variety, according to the ingenuity of the instructor. They should be directed with a definite object, and presuppose in the director some knowledge of the relationship of muscle groups and the planes of muscular movement. With these free hand exercises can be combined marching and counter-marching, different evolutions, and, with women, dancing in its simpler forms, for, as a rule, they can not take such a variety of other vigorous muscular exercises as men. After a degree of ease and proficiency in movement is acquired dumb-bells and the Indian clubs can be added, and a variety of systematic and definitely coördinated movements gone through which are not only efficient but entertaining. The chest weights can also be used, and they possess the advantage of enabling the user to gradually increase the muscular work. Other gymnasium apparatus may be used if convenient, but those I have named answer every practical purpose and may be used in a private house as well as in a gymnasium, consequently they furnish a means available in private as well as public practice. With regard to the chronic insane, gymnasium work forms the best form of exercise available for all those who can be gotten to take part in it, but my observation has been that it is almost impossible to get men and women past middle life to take part in any kind of gymnasium work, whereas they may be interested in a variety of other occupations which will furnish them enough exercise to maintain good

health. I am strongly of the belief that a system of military drill, carried out in definite directions, would materially aid in quieting restless, obstreperous and noisy patients, by expending in uniform channels of activity the irregular discharges of nervous energy which are constantly taking place, without any definite object, but to relieve the overwrought irritability of an irregularly functioning cortex. I have not gone much into detail with regard to the different means of physical culture which can be applied in the treatment of insanity, partly because every one undertaking work of this kind would necessarily have to modify any procedure suggested, and arrange the details to suit the circumstances by which he was surrounded, but principally because my experience has taught me that it is of much more importance to understand the fact of the value and applicability of this plan of treatment. I have found it of most service in hysteria and neurasthenia as concomitants of insanity and in the different varieties of states of depression. It seems to me, however, that physical culture would be most applicable to that large class of cases which never come to institutions for treatment, or else only after all attempts at cure at home have failed. I do not claim for physical culture a place except as an adjuvant, but I do think it an important one, and that under its influence a great many patients will be restored to mental soundness, who otherwise would, in spite of other measures, pass steadily and surely down the stream of chronic insanity from which there is no return, and which ends in the abyss of dementia.

A CASE OF "RAILWAY BACK."

By F. X. DERCUM, M.D.,

Instructor in Nervous Diseases, University of Pennsylvania.

NOTWITHSTANDING that the literature of railway and allied injuries is now quite extensive, it cannot be denied that too little attention has been paid to the physical condition of the back. The back, it should be remembered, is in a large number, if not, indeed, in the majority of cases, the part upon which the injury-inflicting violence is first received, and it has seemed curious to the writer that conditions apparently easy of recognition have not been noted by others, or, if noted, have been passed by without any appreciation of their significance. Apparently, the scientific mind has been taken up by the various symptoms referrible to obscure derangements of function of the cord or brain, or to hysteria, auto-suggestion or what not, while factors less recondite, less difficult of interpretation, have been neglected.

These factors are, in the writer's experience, present in the larger number of "railway spine" cases, and though not always present in the same exaggerated degree as in the patient I am about to show you, they can generally be demonstrated without much trouble.

The history of the case before us is briefly as follows :— G. T., aged forty-seven, single, and an upholsterer by trade, was in good health up to October 22, 1890. On that day he was sitting on the rail of the South Street bridge (Philadelphia). His hat blew off, and letting go his hold upon the rail to catch his hat, he lost his balance and fell a distance of some thirty feet upon a mound of earth. He struck upon the back and head, became unconscious and remained so until he found himself in the University Hospital, to which he had been removed, on the same day. He was at first very much confused, and suffered intensely

from pains in the back and head, and his entire body seemed to tremble. On October 27th he was discharged, and on the same day admitted to my wards at the Philadelphia Hospital. When first seen by me, he walked into the office of the nervous pavilions, walking without assistance. He seemed however weak, and his steps were evidently shorter and slower than normal. He stripped to the waist without help. He complained of pain in the lower dorsal and lumbar regions, and here, deep pressure revealed great soreness. Marked pain was also elicited in

this region by flexion, torsion and transmitted shock. Marked spasm of the muscles in this region was also noted on movement. In addition, there was marked tremor of both arms and shoulders. He also complained of headache and seemed much depressed.

He was at once placed in bed on the rest cure. Milk in as large quantities as he could take was given, and for a time, massage was attempted, but this had soon, owing to the painful condition of the back, to be abandoned. Instead of improving, his symptoms steadily increased in severity

His back became more and more painful. The muscles soon attained a condition of almost constant spasm, and as a consequence, rigidity was very marked. The back soon became sensitive to superficial pressure. Excessive sweating also set in. Tremor became more pronounced than ever. Four weeks after admission, his symptoms had attained their height. The man was thoroughly and abjectly miserable. He was excessively depressed, cried easily, complained of headache, said that he could not sleep, dreamed sometimes that he was falling again from the bridge, had ringing of bells and hissing noises in his ears, trembled worse than ever, had difficulty in passing his water, frequently had sharp pains shooting through his back and head and even in his abdomen. In addition, there was now decided loss of sensation in both feet and he was utterly unable to stand. His weakness was extreme. The sweating continued unabated. Bowels were constipated. Knee-jerks much exaggerated. Micturation frequent.

He remained in this condition with but little change until the latter part of February, 1891. The spasm of the muscles was now wide-spread. Originally, it will be remembered, this spasm had affected only the muscles of the lower dorsal and lumbar regions. Now it radiated to all of the muscles of the back and even of the shoulder.

His speech was at first short and jerky, and at times it was so interrupted and spasmodic as to resemble that of a patient suffering from a chill. Efforts at speaking seemed to increase the spasm of the muscles in his back, and fatigued him very much.

In order to secure absolute rest for a time, a plaster jacket had been applied. In the latter part of February, this jacket, which was worn about a month, was removed. The patient now passed from my hands to those of my colleague, Dr. Sinkler, who again instituted massage. The latter treatment was now well born and appeared to be followed by a more marked improvement. However, the patient lingered in the wards until the following June, when he left the hospital, walking out with the aid of crutches.

October 21st, 1891, he was again admitted to my ward, having suffered some exaccerbation of his symptoms. After leaving the hospital he had rested with some relatives at Ridley Park. Here he seemed to steadily gain in strength until the latter part of July when, after too great effort at walking, the pain in his back again grew worse, the tremor very much increased and he lost considerably in weight.

His condition at present is as follows:—Entire trunk, rigid. Spasm of muscles very marked over all the muscles of the back, shoulders and chest and even noticeable in the muscles of the arms and thighs. Over the back and shoulders they are hard and firm. Here and there, spasm of individual muscular bundles simulate fibrillary contractions, more noticeable in the deltoids than elsewhere.

The spasm is markedly increased by attempts at flexion of the trunk either forward or lateral, as well as by torsion. At the same time that these movements are attempted, the patient complains of pain in the lumbar and lower dorsal and cervical regions. Pain is also elicited in these regions by transmitted shock and deep pressure. Spasm of the muscles is also increased by percussion, but there is at present no hyperæsthesia of the skin.

Almost as striking as the muscular spasm is the excessive tremor which is marked in the head, arms and legs. It is as you see, coarse and of wide extent. If the patient lie down it is diminished, if he exert himself it is increased, though he can momentarily lessen it in the hand on attempting to grasp an object. Evidently this tremor is in some way related to the profound disturbance of the muscles so typically seen in the back. Its significance I propose to discuss in a moment.

The man walks slowly and with difficulty, both by reason of weakness and of pain. The knee-jerks are much exaggerated and there is paradoxical contraction of the tibialis anticus.

There is no loss of sensation at present in the legs. Frequent micturition is, as of old, a marked feature, the man being compelled to rise several times at night. Sweating is still excessive though less so than formerly. Sleep is still very bad, the patient waking frequently and very suddenly. However, frightful dreams and night terrors do-not occur as they did formerly, and in this respect the patient is better.

He still suffers severe occipital headache, the pain extending forward in a line with the base of the skull to the brows. Tinnitus aurium, formerly very pronounced, is still present at times.

He still speaks with difficulty, though his speech is less jerky than formerly.

To my mind the symptoms presented by this man are referrible to two conditions, first, an actual, physical injury,

and secondly, the sequelæ of shock or, to use the more fashionable latter-day expression, traumatic neurasthenia.

It is with the first condition, the physical injury, with which we are more directly concerned. What is it? In order that I may make myself clear, let us picture to ourselves the normal back of an individual walking or standing. Here the spine is held erect and enabled to support its burden of shoulders, upper limbs and head, by the constant action of numerous powerful muscles. Not only is the spine thus relativelyfixed in position, but also, by a constantly varying and accurately adjusted change in the tension of the various muscles, adapted to continual changes of strain. Broadly speaking, in the erect position the muscles of the back are in constant tension. The tension varies, it is true, in degree as secondary strains are brought to bear, but, nevertheless, it is always present. As I have elsewhere expressed it, the erect spine is "like a bow with many tense strings." Now, that under some new and unexpected strain, a severe blow, a sudden jar, actual damage of these structures should occur is not to my mind surprising. Indeed, it is to me almost a necessity. We all know how numerous and complex are the muscles of the back; how numerous and complex are their insertions, and it is extremely probable that actual tears of fibres occur just as we have reason to suppose is the case in other muscular and tendinous sprains. Granted this much, and muscular pain and spasm are accounted for. Further, it is improbable that in severe accidents the damage is limited to the muscles or their insertions. We are all aware of the relations which the vertebræ bear to the intervertebral cartilages and especially the relations which the articular processes bear to each other. Evidently it is merely a question of the intensity of the blow or disturbing violence, as to whether a lesion of their structure occurs or not. We all admit fractures and dislocations of the vertebræ, why not admit sprains of their joints?

We can readily understand that muscular spasm should occur in lesions such as I have suggested, just as it may occur in similar injuries of the extremities. An added and

a powerful factor in the production of the muscle symptoms must, however, be considered. There is always a disposition, involuntary and voluntary, to restrain motion in a part that has been painfully injured. Thus it is that we have spasm first in the immediate neighborhood of the seat of pain and secondly rigidity of the entire back. Every muscle, near or remote, seems bent on holding the very movable spine still. In a large number of cases that have come under my observation, in which the injury was less pronounced and less general than in the present instance, muscular spasm was found merely in the immediate neighborhood of the region of pain or, perhaps, only became evident as the patient attempted to flex or rotate the trunk. In other cases again, as in the present, it was more widely distributed, having radiated to even distant muscular groups. It follows that it is only necessary for the spasm to be sufficiently pronounced or sufficiently distributed to make the entire back very rigid.

So much for the spasm and rigidity exhibited by this patient, but what explanation shall we look for to clear up the mystery of the tremor? Let us look at our patient. It is evident, I think, at a glance, that the tremor is directly related to the muscular spasm. As we look at the back we see that here and there the spasm is not continuous but intermittent, and that this intermittence is synchronous with the tremor observed elsewhere. Evidently the intermittence is but an expression of the weakness of the muscle—of its inability to maintain a continuous tonic contraction, and it is but fair, therefore, to conclude that the general tremor is the combined result of motor erethism and motor weakness.

That the patient should be weak considering the general shock from which he suffered is not surprising. It is not, however, my object to discuss the symptoms referrible primarily to his neurasthenia. They are typical and are such as are present in numerous other cases.

Before handing the patient over for your examination and discussion I would like to call attention to a probable peculiarity of his accident, inasmuch as it may influence our

conceptions in similar cases. This man fell, you will remember, quite a height. You will recall instantly the fact, that in falling the limbs are thrown out in a reflex manner in an attempt to save, and that the muscles become quite rigid. So well indeed is this fact acknowledged that, as you know, surgeons are in the habit of accounting for fractures by supposing that this or that muscle was tense as the patient fell. Is it not probable that the same is true of the trunk and more especially of the back? And if the back of the patient before us was rigid at the moment that he received the blow, so much the more reason for muscle, joint and tendon sprain.

[N. B.—The entire absence of any element of litigation makes the above case exceedingly valuable. The symptoms, both objective and subjective, are identical with those which time and again are presented, in whole or in part, by persons injured in railway accidents.

Further, chronicity is illustrated by this case in a typical manner. At time of going to press, now fourteen months after his fall, the patient is still in bed. He left the latter, as we have seen, during a short interval, in which there was some mitigation of his symptoms. Slight exertion, however, caused a return of their severity, and they are still present in a very marked degree.]

A CASE OF MENINGEAL TUMORS OF THE PREFRONTAL REGION—LATE PULMONARY TUBERCULOSIS—HISTORY OF SYPHILIS.

By JAMES HENDRIE LLOYD, M.D.,

Physician to the Philadelphia Hospital, to the Methodist Episcopal Hospital, and to the Home for Crippled Children.

THE following case presents several points of special interest. The most important are the mental symptoms, such as slow cerebration, caused by a frontal lesion, and the prompt detection of commencing pulmonary tuberculosis. This complication was held to be a good reason for abandoning a trephining operation, which had been determined upon and which would have been successful, probably, in reaching one of the tumors.

R. H., 32 years old, colored, a waiter by occupation, single, was admitted to the Philadelphia Hospital, March 6, 1891. Five years before admission he contracted syphilis, and three years later he had a fit for the first time. He did not lose consciousness in this attack, but he was not able to describe the fit. During the summer of 1890 he had constant headache, which was not localized and which was relieved somewhat by treatment.

The patient when admitted had a swelling of the soft tissues of the brow and eyelid of the right side, with a slight prominence of the eyeball. No paralysis of the third, fourth, or other cranial nerve was observed. Nystagmus was not noted. Lachrymation was excessive. The swollen parts were so painful that the man would not allow manipulation of them. He said that the swelling had been present since the previous Christmas. He complained of much pain in both shoulders. He was not paralyzed in any limb. His heart and lungs were normal. His mind was dull. He cerebrated slowly and did not make known his wants, and unless spoken to he did not speak.

The most characteristic symptom was this slow cerebration. In view of the location of the lesion in the prefrontal region this had special significance. It was peculiar.

The patient seemed to comprehend the question and yet did not answer it for a long period, and not until he had been urged repeatedly. It looked at first like obstinacy, and was so judged by some who saw the case. When the answer came it was correct, but given in few words. This retardation in the time-reaction was estimated at its true value in my original study of the case. I judged it to be pathological and significant of a frontal lesion. The man did not exhibit, however, the irritable and violent character which has been noted by some in lesions of the frontal lobe. Yet his actions were similar to the automatic or reflex movements seen in some of these cases. This was shown especially by his total disregard of time and place in passing his urine and fæces.

Later the superior rectus muscle became apparently paretic, but it was so in appearance only, as the eyeball was held down by the swelling. Although at times there appeared to be some strabismus, it was difficult to tell what muscles were involved. These symptoms were caused probably by œdema of the tissues. Nystagmus was now present. Hyperæsthesia over the forepart of the head, even on the left side, was noted. The temperature, pulse and respiration were normal for the first six weeks, during which time the patient's mental condition did not improve. Muscular rigidity was noted a few times. The knee-jerk was abolished. He passed his urine and fæces in bed. When remonstrated with for his unclean habit, he seemed to be perfectly rational, and to understand what was said to him, but the habit continued because, apparently, of his inability to fix his attention and to respond to sensory impressions. The lower centres acted automatically or reflexly.

On careful inquiry the patient denied any injury. The swelling was crepitant. No alteration of the bone could be detected because of the swelling and pain.

The man continued to have quite frequent fits (several a week). The nurse reported that in one of these the mouth was drawn to the left; consciousness was quite abolished. After the fit the right knee-jerk was much freer than the left. The hyperæsthesia about the eye could be demonstrated even in the post-epileptic stupor. An eye examination at this time by Dr. Gould gave negative results.

The patient left the hospital, and was gone about a month.

When he returned, in June, exophthalmos and swelling about the eye had diminished, but a painful, soft, fluctu-

ating swelling was present over the right frontal eminence. The mental condition had so much improved that it was about normal. He still had an occasional involuntary urination at night, and more rarely an involuntary stool.

At this time, three months after the patient's first admission, the swelling was opened and drained by Dr. F. S. Janney, the resident physician. It contained pus and caseous material. It healed well, and gave no further trouble; but the scalp remained slightly tender at that point.

About one month later the man's temperature was found to be ranging high at night. Physical examination revealed a few moist râles at the apex of the right lung in front, and dry râles high up in the interscapular region. He had no convulsion for more than one month after draining the scalp abscess.

On July 15th, in consultation with Drs. Mills, Sinkler, Dercum and Deaver, of the hospital staff, trephining was decided upon; but one week later the idea of operation was abandoned, because the indications of commencing tubercular disease of the lungs had become still more marked. Careful examination again showed bubbling râles at both apices, most marked on the right, and sibilant râles between the scapulæ. The resonance was impaired over the upper part of each lung. The urine showed a trace of albumen.

The disease advanced rapidly. Expectoration was always scanty. The symptoms of brain disorder continued about the same. The patient had an occasional fit, the character of which was not noted. He was very slow in his movements. His lungs seemed to clear up after a convulsion—that is, he had fewer moist râles. This was attributed to the deep and labored respiration seen usually toward the end of an epileptic paroxysm.

In July an examination of the eyes was made by Dr. de Schweinitz, with negative results.

Up to the time of death, which occurred in October, the symptoms were those of a rapidly declining phthisical patient, the temperature usually ranging between 100, 101½°. For two or three weeks the man was troubled with a severe diarrhœa. A fistula in ano was discovered two weeks before his death. The last convulsions were two in succession about a month before he died. During the last weeks of his illness he did not complain much of headache. He continued to be slow in speech, but, like many phthisical patients, he rather grew in hopefulness

toward the last, and wished to leave the hospital. He was confined to bed about two weeks.

At the close of my term of service, on August 1st, the patient passed into the care of Dr. Charles K. Mills. The autopsy was made by Dr. Leys, resident physician, under the supervision of Dr. Mills.

Autopsy.—To the right of the median line, about two to three inches above the orbit, the calvarium was moderately adherent to the dura mater, and, on carefully removing the bone, it was found to be deeply eroded and infiltrated at this position over a triangular space, the greatest width of which was about two inches. The eroded area presented a caseo-purulent appearance. The inner plate of the bone had been largely worn away, and the entire bone presented a water-logged appearance. Just at this position, perforating the dura mater, was a tumor, one inch by one and a half inches in its greatest dimensions, soft and yellowish in color. It was over the anterior portion of the second frontal convolution. Subsequent examination showed the dura and pia arachnoid and cortex were loosely agglutinated. The cortex was somewhat infiltrated and softened. In a symmetrical position on the left side, an exactly similar mass was found, but it was only about one-fourth of an inch in diameter. A third similar and still smaller growth was found over the inferior parietal convolution, just behind the retro-central fissure. The ventricles were moderately dilated. The rest of the brain and spinal cord showed no gross abnormalities.

A recent pleurisy was observed over the lower lobe of the left lung, and areas of chronic pleurisy were widely distributed. In the upper lobe of the right lung was a large cavity, and both lungs showed general tubercular infiltration. No tubercular deposits were present in other organs.

HEMORRHAGIC TUMOR OF THE PITUITARY BODY AND INFUNDIBULUM IN A CASE OF PERNICIOUS ANÆMIA.

By J. M. ANDERS, M.D., and H. W. CATTELL, M.D.

(Reported from notes by Dr. F. B. Reynolds, Resident Physician, Philadelphia Hospital.)

April 24, 1891.—T. H., aged 34, waiter, was admitted to the Philadelphia Hospital in 1887. His mother died of consumption; his father is living and well; he has no brothers and sisters. He was delicate as a child, but his health was good as he grew up. He never used liquor to excess, and had had no venereal disease.

In 1871, while working in a swamp in Virginia, he had chills and fever; he had a chill daily, for every other day, for about six months. He was then unable to work steadily, and he grew weak and lost flesh. At the end of six months he left the locality, and thinks he recovered perfectly. He then went to work, and was in good health until the fall of 1874, when he had typhoid fever. He was in bed about six weeks, and after this he was very weak and pale, and had constant sensations of coldness. After the typhoid fever he gradually regained his strength, but noticed that the pallor continued, and he never had his former robust appearance. He did not begin working until June, although he felt in his usual health for two months before this; he worked steadily for fourteen years. After the fever, he says that his hair all fell out, even over his body, and it never returned as before. He has no beard, and the hair about the pubis is very thin and coarse; it is about an inch long at the symphysis.

A year after having the typhoid fever he began to have attacks of dizziness, and things would look colored and blurred, and he would be unsteady. He had constant pains in the head, and during the attack would be nauseated, and vomit. He would be laid up and unable to work for several days at a time; and besides the dizziness he would have sensations of falling, and at times would become unconscious. These attacks continued to become more frequent and severe for about two years, but he noticed no change in his general health. He was under medical treatment, and the attacks became less frequent and severe. From

this time, until his admission to the hospital in 1887, he had no other symptoms.

In July, 1887, he was taken with a severe diarrhœa, after he had been drinking some, and had been eating fruit. After admission, the diarrhœa grew better in about two weeks; when, however, he had a chill, and for eight or nine days after this he was unconscious. He remembers nothing during this time, but was told that he would appear conscious for a few minutes and try to speak, but was unable to do so. When he did regain consciousness, he was weak and exhausted, and could not raise himself in the bed. He was kept in bed for about two months.

He regained his strength but slowly, and had not been as strong as before since the attack of diarrhœa. He then went to work in the dining room of the hospital, and continued for six months. During this time he had slight attacks of dizziness.

In the fall of 1890, while at work, he complained of pains in his head for about a week; these gradually grew worse, so that when stooping his head would feel as if it would burst. One day, while pouring out milk, everything turned of a red color, and whirled around, and he became unsteady and lost consciousness for a few minutes. When he recovered he felt weak and dizzy, and had no appetite. He remained in bed about ten days. Of late he has had dizzy spells much less frequently, and his appetite is very good.

He occasionally has pains in all the joints, at which time he loses his appetite and has an increase of headache.

He has had attacks of quite severe nose bleeding. He has not had any cough.

He feels much better in warm weather and has trouble in keeping warm in winter. He is very sensitive to sudden changes of temperature.

The following notes, made March 5, 1889, are among the hospital records:

April 5, 1891.—The patient is sallow and anæmic to a most exaggerated degree. Emaciation is not at all marked, and there appears to be a goodly layer of adipose tissues; the joints and angles of the body are all rounded out. The tongue is pale and marked by the teeth; the gums show some reddening. The finger nails are not clubbed, but the hands and fingers readily become cyanotic, and the patient says they become cold. The chest is marked by blue veins shining through the translucent skin. The chest is full, rounded, and expanded well. There are no changes

in percussion resonance, and none in the vocal resonance and fremitus, and no râles or adventitious sounds are heard. The heart sounds are normal, the second is accentuated, no murmur is heard at the base, and none in the veins of the neck. There is no enlargement of the liver or spleen. The abdomen appears distended, and gives a tympanitic sound on percussion.

August 18, 1891.—During the past three months the patient has had an attack of acute aortic rheumatism, and has lost ground during this time. He has been very weak, and has remained in bed most of the time; he has had no appetite, and has vomited nearly everything he ate. He was put upon tonics and improved.

October 2, 1891.—There is little improvement in the patient's condition. He has had attacks of facial neuralgia; and of anorexia with vomiting. His legs are somewhat swollen at night. He has no change in color, being still of a pale saffron hue. This morning, while walking, "things looked black," and he fell. To-night he feels cold and very weak; appetite is absent, and he has eaten nothing for twenty-four hours. Such attacks as these have been common.

October 7, 1891.—This morning, Dr. Reynolds' notes are as follows: "The patient seemed in his usual condition, and took his medicine about 10.45 A.M. The nurse noticed that he picked at the bed clothes. On going to him she found he was delirious and understood nothing that was said to him. I saw him soon after, and his condition was very peculiar. His facial expression was blank, eyes open, pupils moderately dilated, but immovable. There was some internal strabismus of the right eye. He did not recognize me. On touching or moving him he gave a very peculiar cry, like that of a calf, which was audible in adjacent wards. This cry he repeated at frequent intervals. At times he would attempt to strike or clutch those near him, but without much force or purpose; he would throw his hand to his head as if in pain. He was at no time in an excited condition, and the delirium was mild. There was no evidence of paralysis. His temperature was 97°; respiration, 16; pulse, 48, and inclined to be irregular, every third or fourth beat being replaced by two in rapid succession; the pulse was small, but did not seem to differ much from the normal volume. The heart sounds were clear and distinct. He was catheterized, and six ounces of clear urine, of light yellow color, sp. gr. 1024, acid, and without a trace of albumen, was drawn. At the apex of the right lung percussion

dulness was noticed, and numerous mucous râles were heard on auscultation; otherwise the lungs were normal. This condition had not been discovered before, and had probably existed only a short time; he had had no lung symptoms.

"He remained in the same condition for about an hour, after which he gradually began to notice objects and answer questions in a confused manner. At one o'clock his mind was in about its usual condition. The strabismus had disappeared, and the pupils reacted to light. He said that he thought he had been dreaming, but remembered nothing that had occurred while delirious.

"*October 8, 1891.*—The patient had a return of delirium this morning, but it was not so marked as yesterday. He could be made to understand questions, and he was not as restless, and did not cry out as yesterday. The condition lasted about two hours; his mind was clear in the afternoon.

"*October 9, 1891.*—During the night he was delirious and unconscious most of the time. About 7 A.M. he had a clonic and general convulsion, lasting about five minutes, followed by stertorous respiration. During the day he had three more until 3 A.M. He had been unconscious, turning at times and unable to take medicine or nourishment. Temperature was subnormal; pulse 48. He passed very little urine. He died at 8.30 P.M., somewhat suddenly in a slight convulsion. He had five convulsions during the day. For one hour or more before death each expiration was accompanied by a deep moan. All his symptoms during the past three days had closely resembled those of uræmia, and I am not sure but that his death was due in whole or in part to uræmia, although no urinary symptoms but partial suppression could be detected."

Autopsy.—Held nineteen hours after death: The body of a well-formed man, having practically no hair on the body except a small patch on the pubis; the skin was like that of a woman. Pleuritic adhesions were found at both apices. The lungs were somewhat emphysematous. Throughout the whole post-mortem but little blood was lost, the tissues being very anæmic—almost bloodless; there was a considerable amount of pericardial fluid. The heart was small, with no lesions.

The weight of the liver was two pounds three and a half ounces, and it appeared to be atrophied. The right kidney was larger than the left, with a beginning parenchymatous nephritis in both. The marrow of the long

bones was redder and softer than normal. The spleen was small; the capsules somewhat thickened and white in places. The bladder contained about six ounces of urine. The vermiform appendix was patulous. The supra-renals and cord were not removed.

On lifting the frontal lobes of the brain, a glistening membrane, the size of the middle finger, was observed about the position of the infundibulum; this covered the roots of the olfactory bulbs and the optic chiasm, and extended over the anterior cerebral arteries. On cutting the dura the mass was found to be of doughy consistence, and it exuded a brownish fiuid. It protruded from the sella turcica, being in the position of the pituitary body and infundibulum. It was apparently a pigmented hemorrhagic tumor. The pituitary body was infiltrated and changed, and destroyed to an extent that could not be determined in the gross specimen. On dissecting the mass out of the sella turcica, and placing the brain base upward, it was about one inch in its greatest diameter, and it had displaced the dura mater, portions of which tightly encircled and constricted it, so as to form a stout pedicle in the position of the infundibulum.

DISCUSSION.

Dr. H. A. TOMLINSON read a paper, entitled

A STUDY OF THE INDICATIONS FOR, AND APPLICATION OF, PHYSICAL CULTURE IN THE TREATMENT OF INSANITY AND ALLIED DISEASES. (See page 3.)

"RAILWAY BACK." (See page 11.)

Dr. F. X. DERCUM read a paper on the above subject, and exhibited a patient.

Dr. JAMES HENDRIE LLOYD presented a paper on

A CASE OF MENINGEAL TUMORS OF THE PREFRONTAL REGION, WITH LATE PULMONARY TUBERCULOSIS, AND A HISTORY OF SYPHILIS. (See page 18.)

HÆMORRHAGIC TUMOR OF THE PITUITARY BODY AND INFUNDIBULUM, IN A CASE OF PERNICIOUS ANÆMIA. (See page 22.)

BY J. M. ANDERS, M.D., and H. W. CATTELL, M.D.

[Reported from notes by Dr. F. B. Reynolds, Resident Physician, Philadelphia Hospital.]

Dr. CHARLES K. MILLS.—I had the good fortune to be present at the autopsy in this case of Drs. Anders and Cattell, which is interesting from various points of view; but I will leave to others the discussion of it without reference to the subject of pernicious anæmia, and will direct my attention to the lesion of the pituitary gland, and to the question of the localizing symptoms which are afforded by diseases involving this gland. Many parts of the brain have through physiology and clinico-pathology afforded us exact localizing phenomena; some parts cannot be reached by the physiologist and therefore we are compelled to depend upon the results afforded by injury or disease. The pituitary gland is among these. It is probable, in fact almost certain, as will

be referred to later, that the pituitary body is not a real division of the brain, but a gland comparable to the thyroid, thymus, etc.; but gland or not it has its functions, and moreover, its location is such that many lesions attacking it would involve vessels, nerves, and parts of the brain in such a way as to give definite phenomena. In other words, its diseases will afford a symptom-picture, which will be largely filled in with phenomena dependent upon involvement of surrounding parts.

Although the history prepared by Dr. Reynolds is well told, it is not easy to determine just which symptoms should be referred to the pituitary lesion, which seems to be hæmorrhagic in nature. It appears most likely that we should date these symptoms to the autumn of 1890, when the patient complained for a week of pains in his head, which when he stooped were so bad that he felt as if his head would burst. It is also said that about this time everything turned of a red color and whirled around, and that he became unsteady and lost consciousness for a short time. From this time on he had spells of vertigo at irregular intervals, also attacks of nose-bleeding, and increase of headache. In October, 1891, he had attacks of facial neuralgia and of anorexia, with vomiting; on October 7th he became delirious and stuporous, and had internal strabismus, with dilated immovable pupils. During the day before his death he had several convulsions. These few symptoms are all that it seems likely can be referred to the intra-cranial lesion, and even the convulsions may have been due to uræmia, as Dr. Reynolds suggests.

One of the best articles on the pituitary body was written by an American, an associate member of this Society, Dr. Middleton Michel, of Charleston, South Carolina (Charleston Medical Journal and Review, vol. xv., No. 2, March, 1860). This is an essay on the pathology of the pituitary body, presented to the South Carolina Medical Association, and it includes the record of a rare and interesting case. As I do not think it is well known I will take the liberty of calling attention, at some length, to it in concluding my remarks. The patient was a negro, thirty-five years old, a carpenter, and a man of regular habits. He first complained about the head and cloudiness of vision, in September, 1851. He was soon the victim of intermittent headaches, and the imperfection of sight progressed rapidly until he became almost blind. Occasionally he had intense pain in the frontal region, accompanied with a sense of fulness about the orbits. After some months the eyes increased

in tension and apparently in size. His appearance and gait became those of an amaurotic individual—the eyes largely opened, the pupils almost immovable and dilated. He complained of throbbing and augmentation of pain upon inclination downward of the head as in stooping, and lying down increased his sufferings. Ptosis appeared and progressed. The eyeballs preserved their parallelism, became sensitive to the touch, and œdema of the subconjunctival tissues increased. He developed fever, insomnia and delirium which lasted several days but left him comparatively easy. Chemosis and protrusion of the eyeballs increased ; the corneæ were completely covered, and fungus-looking incrustations and hideous exophthalmia resulted. A swelling appeared in the right temporal region ; and deafness in the right side, strange sounds in the right ear, obstruction of the nostrils, marked inordination of gait, a perversion of the sense of taste, which induced a somewhat imperative demand for sweets, extreme apathy, some forgetfulness, and hopeless despondency, with otherwise a preservation of his intellectual faculties, completed his train of well-observed symptoms. His pulse was usually weak and rapid, ranging between 90 and 115. Without any previous abdominal trouble he was seized with an obstinate diarrhœa which lasted for ten days, when he died. The autopsy showed in the site of the sella turcica, a tumor resembling a ripe blue fig, which became detached from the infundibulum in the dissection. From this tumor a pediculated mass of much larger size extended beneath and to the right temporal fossa, unattached to either cerebral lobe, forcing its way through the base, orbito-nasal, and right side of the skull. The tumor exuded a dark grumous substance of a very offensive odor. The related bones had suffered extensive ravages. The optic nerves were reduced to mere threads. The pons and oblongata were atrophied to the size of the little finger. From subsequent examination Michel concluded that the growth was cancerous.

The author of this paper carefully reviews and summarizes the literature of diseases of the pituitary body ; and to this paper I would refer those interested in the subject for the literature to that date. The cases brought together are of much interest from the pathological side, but teach but little as to the functions of the pituitary gland

He holds that if we are warranted in drawing any conclusions respecting the nature or the functions of the pituitary body, from researches into its diseases and their most frequent symptoms, they would seem to be the following :

"First, that the pituitary body, however largely developed in some animals, is not a primary condition of the brain, or a true encephalic ganglion, since its complete destruction is never accompanied by loss of intellection, motion or sensation, beyond what may satisfactorily be accounted for by the necessary pressure which the morbid growth exerts upon more essential parts of the encephalon.

"Secondly, that from several of the morbid processes enumerated in this memoir, we have strong proof of the identity of the nature of this hypophysis with certain so-called vascular glands such as the thyroid, thymus, spleen, and supra-renal capsules.

"Thirdly, that while the diagnosis of its morbid conditions is rendered somewhat obscure from the absence of any ascertained functions of the part, yet their almost constant connection with the simultaneous production of amaurosis in both eyes, with absence of symptoms of cross paralysis will indicate the seat of the disease, when compared to morbid states of either hemisphere.

"And fourthly, that the long continuance of disease in this situation may propagate inflammatory action to neighboring parts, followed by apathy, somnolency, syncope, cophosis, and other symptoms obscuring diagnosis."

Dr. F. X. DERCUM.—With regard to tumors in the position of the pituitary body many of the members will remember the case of Dr. Weir Mitchell's of aneurism of an anomalous artery crossing the sella turcica. This aneurism was the size of a small pear. There were no symptoms other than headache, weakness, vertigo, and bitemporal hemianopsia. The latter was enough to settle the diagnosis of the location of the tumor, and this was confirmed at the autopsy.

The next paper was an account of a case of

HYSTERICAL RHYTHMICAL CHOREA, CONTRACTURES, AND ANÆSTHESIA OF LONG STANDING—A CURE OR GREAT IMPROVEMENT ATTRIBUTED TO A VISIT TO LOURDES.

By CHARLES K. MILLS, M.D.

This patient began when she was about thirteen years of age with lumps in her throat and a barking cough. The latter lasted for several months, when she began to have

a rhythmical tremor of her limbs. She was treated by various physicians, among others by Drs. Wirgman, O'Hara, Wood, and the writer.

Her troubles began about fourteen to fifteen years ago. A clinical lecture on her case, by Dr. H. C. Wood, reported by me, was published in the "Philadelphia Medical Times," February 26, 1881. The case was also referred to by me in a lecture on hypnotism in the "Medical Times," November 19, 1881. The following description from the lecture in the "Times" of February 26, 1881, will convey an idea of the character of the movements with which she was affected: "She lies in bed propped half up with pillows. Her forearms are held flexed on her arms at an angle of a little less than 90°, one hand usually near to or loosely thrown over the other. Her thighs are flexed on the pelvis at an angle of about 160°, and the legs and thighs at an angle of 110°. The limbs, held by clonic spasm in this position, are in a constant state of rhythmical vibratory movement. The forearms move up and down over a limited area, with the hands moving inward and outward, so that the knees sometimes strike together. The movements of the upper and lower extremities are in unison. At a number of counts they were from 110 to 120 per minute, the knees at each vibration moving about three inches."

The movements were still during sleep; she menstruated but once, and then imperfectly. The muscles of her back were weak, and she had, in 1881, acquired considerable curvature. Skin reflexes and knee-jerk were diminished and she was anæsthetic below the knees. In brief, the case was a marked one of grave hysteria, the prominent symptoms being rhythmical chorea, decided contractures, changed reflexes, anæsthesia, and nearly total inability to walk. She could, at least, during part of the time that she was under my observation, succeed in getting on her feet and making a little slow progress, although when doing this she was contracted and contorted into the most grotesque shape.

Many methods of treatment were employed unsuccessfully. They included the use of electricity; the whole round of nervous tonics and placebos; putting the limb in fracture splints; hypnotization; and the most strenuous efforts to make mental impressions and thus arouse her will. She became the object of great interest in her neighborhood; and at various times she was visited by priests, physicians, and curious or interested persons from a distance. At one time she was an inmate for some weeks of the hospital of

the University of Pennsylvania, and of several other hospitals. Dr. O'Hara attended her at intervals for several years, when she passed out of his care but again came under it at St. Mary's Hospital last spring. He found her somewhat improved then as compared with her condition ten years before, but believes she was not, when he last saw her, able to walk.

In the early part of August of this year she started with her brother for the shrine of Lourdes ; and it is stated that she was carried on board the steamship on a couch, and was transported in various ways, but without the help of her own limbs until she reached Lourdes. A journal published at Lourdes, reports that after a most painful journey she arrived there on August 12th, and that, being completely ignorant of the French language, she passed three days without being able to find the bathing pool, but once found, she bathed day after day ; and on Friday, August 21st, she was able to walk. Soon after she started for home, and after her arrival in Philadelphia she became the subject of several sensational articles in the newspapers, which detailed her story and described her remarkable cure. Some of the accounts were highly colored, and were more interesting for their rhetoric than for their scientific accuracy, although on the whole her story was fairly told. One paper stated that the muscles of her arms and legs became calcified, which was its way of describing the condition produced by hysterical contractures.

With Drs. O'Hara and Wirgman, I have visited this interesting patient twice since her return and have carefully examined into her condition. I have also met her once in a street-car, and have thus had the opportunity of talking to her when she was not the subject of a medical or other visitation. Undoubtedly a great change for the better has taken place. The rhythmical chorea has entirely disappeared ; the contractures are greatly improved, and have largely disappeared, although at the time of my last examination some contracture was still present, particularly in one of her legs. The anæsthesia has disappeared. She is now able to walk with comparative facility and ease, and not only goes up and down stairs and around the house, but frequently takes journeys out of doors, much to the benefit of her general health. Menstruation has not yet been established, and she still presents a marked curvature of her trunk, giving her a bowed and more decrepit appearance than her real muscular and general condition warrants.

This case, although by no means unique as some of our journalistic friends would have us believe, should interest all practical neurologists. In common with some others I had always held that her case was a curable one, although the persistence of her symptoms in spite of energetic and varied treatment was calculated to throw doubt on this prognosis, and many who saw her regarded her as consigned to the rank of the incurables. Into the miraculous nature of the "cure" it is scarcely necessary for us to enter. The Catholic Church, of which she is a devout member, would not accept such a case as miraculous until it had been thoroughly probed and proved. The case is impressive as showing the importance of powerful mental and moral impressions on such patients.

Hysterical rhythmical choreas of this type are certainly rare in this country; but, strange to say, I have seen another of exactly similar character, and of only a few weeks' duration within a month.

DISCUSSION.

Dr. H. C. WOOD.—The history of the curing of disease by religious influences and religious emotions offers one of the most curious chapters in medical history. I have seen a case of apparently hopeless insanity, of fifteen years' duration, that had gone the round of the asylums, get well in a single night. Under some influence she got upon her knees and spent the night in prayer, and in the morning she was well.

I know of another instance, that of a Quaker preacher, who went with his wife to a certain meeting in Chester County. He was insane, apparently imbecile, and had not spoken for many months or even years. As he was sitting in the carriage by himself, another well-known Quaker preacher came up and laid his hand upon him, and quoted the well-known saying of Paul: "Silver and gold have I none, etc." Nothing more was said, and the preacher went into meeting. When the meeting was over the wife got in the carriage to drive home, when her husband said to her: "Sarah, had we not better go to Cousin John's for dinner." The woman nearly sprang out of the carriage in her excitement. That was the end of that man's insanity, as far as I know, permanently.

I have seen a whole family frightened into hysterics by a woman who had been in bed for fifteen years, seemingly incurable, with grave spinal anæmia, so-called, and marked hysteria, under the influence of a religious idea, the so-called faith-cure, walking downstairs and taking her seat at the table.

I cannot myself believe that these extraordinary cases are of the nature of miracles. I have seen one or two of these same individuals seized with organic disease and rapidly die, one of them at least, apparently because of the refusal to accept medical aid. I have also seen as a result of this intense religious belief, the most horrible mental suffering that I have ever witnessed in a sane individual. A case suffering from organic disease became immensely impressed with the doctrines of the faith-cure, and as a result of prayer believed that she was cured of her disease, which had been present for many years and had marched steadily onward in spite of the best medical attention. To her friends I said that she was not cured, but that under the influence of emotion there had been a temporary arrest of her disorder, and that in a few weeks or months it would return. It did return. The person who had inculcated the doctrines of faith-cure told her that the disease had returned on account of her lack of faith. The woman firmly believed that the disease had returned on account of her own wicked lack of faith, and that she was drifting to death and eternal punishment, through a physical disease brought on by her own sins. This made a mental conflict that I have never seen equaled in a sane person.

I believe that all these cases are instances of the effect of mental impressions, and certainly do not believe in the present occurrence of miracles.

Dr. M. O'HARA.—I treated this woman for years without the least benefit. Last May I saw her in St. Mary's Hospital, and I expressed the opinion that nothing medically could be done for her, as the ordinary medical means had been applied. I thought that the case had been in existence too long to be curable. She appeared then somewhat fatuous, and I thought that her brain-power had been reduced by her long illness. She never showed a full amount of brain or nerve power at any time when I visited her. She then went to the shrine of Lourdes and came back as she is. The history of the case has extended over some fifteen years. She, however, is not entirely cured, and I should not be surprised if the trouble would return if some severe illness occurred. There is one thing that must be borne in mind, and that is that last spring her mother died, and possibly this compelled her to more animation, and to think for herself. She always expressed the desire to go to Lourdes, and felt sure she would be cured of her ailment if she reached there. The gratification of this overweening desire seems to have been followed by success, though her menstrual function has never returned.

I have been particularly interested in these manifestations at Lourdes. There they separate these cases of hysteria and consider them not as miracles, but as graces of returning health. Dr. Wood says that all these cases are the result of mental impressions. I think this is incorrect; and I have established in my own mind, from investigation, that absolute miracles occur at Lourdes, although I would not account this case as a miraculous cure, but one in which religious influences aided the natural processes. I would not consider it a miracle; to Sarah Ferry it is a miracle, however, as she goes about walking and doing her duties cheerfully, which she had not been able to do for so many years.

Dr. CHARLES K. MILLS presented a

NOTE ON THE IRREGULAR DISTRIBUTION OF ANÆSTHESIA IN THE FACE IN CASES OF OTHERWISE COMPLETE HEMIANÆSTHESIA.

It is sometimes important to put on record a single fact, and even one which may in itself seem trifling, as such a record may suggest to others an explanation which does not strike the observer. It is in this spirit that I note what I have a number of times observed, that in cases of hemianæsthesia, both organic and hysterical, the anæsthesia shows a particular tendency to irregularity in its distribution on the face. This irregularity exhibits itself in various ways, which may perhaps be best illustrated by referring to two cases, patients at present in the women's ward for nervous diseases in the Philadelphia Hospital. The first case is clearly organic in origin, and has already been described by me in a published lecture; the second, which is as clearly hysterical, with various distinctive phenomena of grave hysteria, such as aphonia, hemianæsthesia, hemiparesis with leg contractures, achromatopsia, and dyschromatopsia, etc., will be soon reported at length by my resident physician, Dr. Leys. The case of organic hemianæsthesia is probably due to an old hæmorrhagic cyst which has destroyed the posterior portion of the right internal capsule—anæsthesia, paralysis and contractures being present in the left half of the body. She is totally anæsthetic to touch, pain, and temperature on the left half of the body, except in a small area on the face. This area of retained sensation includes the orbital region, the side of the nose, and the left cheek within a line drawn from the external angular

process of the frontal bone to the alæ of the nose. It is curious also that the mucous membrane of the mouth is anæsthetic, except in an area which corresponds as nearly as could be determined, to the sensitive region of the skin. In the hysterical case, anæsthesia to pain and temperature—but not to touch—is complete on the right half of the body and extends across the median line so as to include the entire left side of the nose. In other cases I have noted complete hemianæsthesia, except that in the face, and on the head, both back and front, sensation was perfectly retained for a distance of an inch or more beyond the median line.

Stated Meeting, November 25, 1891.

The President, Dr. H. C. WOOD, in the chair.

AN INDICATION FOR TREATMENT IN HEMI-FACIAL ATROPHY.

BY F. X. DERCUM, M.D.

Instructor in Nervous Diseases, University of Pennsylvania, Neurologist to the Philadelphia Hospital.

OUR knowledge of the pathology of hemifacial atrophy is still very meagre. It has been proposed to explain this disease in various ways: First, that it is due to an idiopathic atrophy of connective tissue elements; secondly, that it is secondary to some affection either of the sympathetic, the facial or the trigeminal nerves. To suppose it to be due to an idiopathic atrophy is to beg the question, and further gives no explanation of the remarkable limitation of the affection. To suppose disease of the sympathetic is not warranted by the symptoms. There is a conspicuous absence of vascular dilatation or pupillary phenomena. To suppose the facial nerve to be at fault also fails to accord with the facts. It is well known that the muscles are not conspicuously involved, apparently in some cases not at all. Further there is no paralysis, nor are there any electrical changes in either nerve or muscle.

That the fifth nerve may in some way be related to the cause of this trouble is not improbable; on the contrary, it is in the highest degree probable. There are, in the first place, certain facts which point to direct participation by the trigeminus. These are: first, the sensory disorders. It is true that anæsthesia is very rarely present however; the neuralgic pains, the toothache present in the beginning of some cases, the darting pains present in others are of undeniable significance. Secondly, the spasmodic contractions which have been observed in the motor distribution of the

fifth—rarely, it is true—can have but one meaning. Thirdly, the distribution of the atrophy along the three branches of the trigeminal and its limitation to these parts is in the highest degree suggestive. Finally, within a few years these speculations have been strengthened by the results of a post-mortem examination made by a man of no less skill than Mendel.[2] The patient was a woman whose case had at different times been studied by Romberg and Virchow, and who finally died of phthisis. Mendel found atrophic changes in the descending root of the trigeminus, while the other root was normal. It would seem, therefore, that the descending root contains the trophic fibres. The fact that the ascending or sensory root was found to be normal is in accord with the preservation of cutaneous sensibility. Further, if the inference be correct that the descending or motor root contains the trophic fibres, it must be equally true that these trophic fibres are not in their final distribution limited to the muscular branch of the nerve but accompany the sensory branches as well.

Now, no treatment has ever been proposed for this affection that has yielded any definite result. This is true alike of electricity, massage, and internal medication. The outlook as regards recovery has always been regarded as hopeless. The only consolation that has been held out to the patient is that the disease might some day cease of its own accord—certainly a meagre satisfaction when we reflect that spontaneous arrest does not take place in the majority of cases until the deformity has attained very great proportions. It is certainly anything but a pleasant prospect to know that the disease will not be arrested until the entire cheek is sunken in, the jaw shriveled, the teeth lost and the nose twisted to one side. Assuredly if anything can be done to avert this distressing result, it should be attempted.

The following somewhat radical expedient has suggested itself to the writer. It is a well-known fact, based upon repeated and familar experience, that section or excision of the various branches of the trifacial for the relief

[2] Mendel, Deutsche med. Ztg., 1888, 33. p. 407.

of neuralgia is not followed by any atrophic changes. *It would seem, therefore, that in hemifacial atrophy the disease depends not so much upon a failure of trophic nerve stimulus as upon a radical perversion of that stimulus.* If it depended upon a simple failure of trophic stimulus, simple arrest of development, simple diminution in the amount of growth would be the result. Here, however, we have instead an aggressive, an invading process, an actual tearing down and reabsorption of structure. Evidently the indication is to interrupt the communication between the trophic centre and its peripheral distribution. The expedient, then, which I would propose is resection of the various branches of the trifacial as far as accessible, the operation to be undertaken at as early a date as possible. In order that a maximum amount of benefit should result, it is of course essential that the correct diagnosis be made at an early day—as soon, if it be possible, as the ominous white patch, the initial change in this dreadful disease, makes its appearance on the cheek.

The only unpleasant consequence of resection of the trifacial nerve is the anæsthesia, and to this, as experience shows, patients soon adapt themselves. Should the expedient fail little or no harm will have been done. Certainly, in the present aspect of the disease any expedient offering even remote chances of benefit should receive most careful consideration.

TWO CASES, BROTHERS, OF FRIEDREICH'S ATAXIA, ASSOCIATED WITH SYMPTOMS OF SPINAL CHOREA.

By J. MADISON TAYLOR, M.D.

As a contribution to the interesting subject of hereditary cord trouble, I think it well to put on record the brief and imperfect notes of two brothers, who came under my observation two years ago. These men I have not been able again to see for further study, but am of the opinion that such facts as are in my possession might be of use in throwing additional light upon this interesting study.

S. R., a strong-looking vigorous man of thirty-six years of age, applied to me for relief from a condition of increasing tremor. The tremor was the most noticeable feature—fine, disturbing his voice, and giving it a vibratile quality, and also to his limbs a constant choreiform movement. This was much like the movements of a child with general chorea. Volition lessened the movements much, and he was enabled to make a pretty fair living as a farm laborer. His gait was decidedly ataxic; very like the ataxia of posterior sclerosis. The knee-jerk had entirely disappeared, nor could it be reenforced. This man had been married eleven years, and had three healthy children. His parents were living and healthy. There were several brothers and sisters, one brother affected like himself, whose notes are also given below. This man was five feet five inches high, exceedingly well-nourished and muscular. He had enjoyed the reputation of being quite an athlete, and I was assured by a friend, who accompanied him, that he could stand upon a piece of soft ground and turn front somersaults very cleverly. There was no history of syphilis or any serious disorder. There never had been any injury. The first symptom that he could recall was a tremor in his right hand, which began about the age of twenty-four or twenty-five. Four years later it appeared in the head. At the age of about thirty, darting pains began in the lower limbs; sensation apparently unaltered; station very bad. Upon attempting to stand, the man lurched so largely as to have some difficulty in steadying himself upon his legs, but once securing his

balance he could stand pretty well. In starting to walk, a rush was made first, which, being recovered from and the way perfectly plain, he could walk quite comfortably with the rolling gait of a sailor. Standing, however, with eyes closed the man almost always fell. This large tremor had greatly increased of late, especially in the neck, giving to the head a sort of rolling motion, like that seen in dogs troubled with chorea. The knee-jerk was absolutely gone in both legs, and could not be elicited by reënforcement; in the arms it was scarcely demonstrable. The pupillary reactions roughly taken seemed very sluggish to light, and for distance were only moderately good. Digestive functions excellent; heart sound; muscular system unusually good.

M. R., aged nineteen, a rather short, but rather muscularly-built man, brother to the above, had for four or five years stumbled in the dark. The general features of tremor, etc., were much like that of his brother, in lessened degree. The voice had the same vibratile quality. He admits to having a very quick temper, and notices that, if greatly excited, he always loses the power of clear speech, or accurate coördination. The station of this young man was very bad. The eyes being shut, wide lurches were made, though the position could be held. The knee-jerks on both sides had entirely gone; arm-jerks normal, but upon reënforcement seem rather exaggerated. The pupils respond quickly to light, but there is a slight nystagmus in the left eye; sensation does not seem altered; voluntary motion also controls tremor largely; general health good; functional activities admirable; no history whatever of injury or disease.

DISCUSSION.

Dr. WHARTON SINKLER.—From the history of Dr. Taylor's case, it seems to me that they were cases of the hereditary form of ataxia rather than cases of spinal chorea. The occurrence of the disease in two members of the same family, the absence of the knee-jerk, the incoördination, the sluggish pupillary reflex, and the nystagmus point in this direction. The tremor of which Dr. Taylor has spoken is, as we know, frequently present in the Friedreich's ataxia, giving rise to the so-called static ataxia, that form which is present when the patient attempts to assume the erect position, or to hold out the arm or leg—in fact, the tremor occurs when the patient attempts to maintain the head or a limb in one position.

Dr. F. X. DERCUM.—I have seen only one case that I considered spinal chorea, and Drs. Weir, Mitchell and Burr concurred in the diagnosis. In this case, although there was not a well-marked to-and-fro movement, there was a tendency toward rhythm, such as is seen in chorea in the dog. The term "canine chorea," used at first by Dr. Mitchell, seems a better one than spinal chorea. There is still room for a difference of opinion in regard to spinal chorea being a distinct clinical entity, but certainly the case that I saw was different from any case of ordinary chorea that I have met with.

A CASE OF FRIEDREICH'S ATAXIA.

BY FREDERICK A. PACKARD, M.D.

The patient that I wish to show to the Society this evening was admitted to St. Clement's Hospital on October 10, 1891, complaining of difficulty in walking.

The following notes were taken: Annie C——, white, æt. 25, a native of Pennsylvania, came from the interior of this State. Her father and mother are living and in good health. She has six brothers and four sisters, Annie being the fifth child. All her brothers and sisters are living, and are all healthy, with the exception of one brother, who has "trouble like hers." Regarding the symptoms and history of this brother, I received a letter from the mother, in which she says that he is thirty-one years old, and has been living in Nebraska for several years. That several years ago he began to have trouble in walking, which has increased much "of late;" that his speech has not changed, but that "he has trouble in using his hands." Nothing more definite could be obtained. There is no history of intemperance or consanguinity in the ancestors.

She had scarlet fever and measles as a child, but seemed to recover from them perfectly. She has always been strong and well until the present trouble began. She has always talked slowly, but her mother states in her letter that, "it may be her disease causes 'that sort of chanting,' as you say." Her mother states that a change in her manner of walking has been coming on for several years, but that it was not marked until last autumn, when she began to waddle on walking. Annie herself dates her trouble from one year ago, when she began to notice that when she became tired she would walk unsteadily. This trouble with walking gradually became more pronounced, so that she soon found that she walked unsteadily, whether tired or not. She has

noticed that she walked more unsteadily in the dark than in the light, and that when her eyes were covered by her hands, as in washing, she would reel. She has had no pain whatever—nothing in the nature of girdle—sensation or lancinating pains. She at times suffers from frontal headache, with vomiting, but there is nothing bearing resemblance to gastric or other crises. Hearing is normal. Vision is defective, being at times affected as though by a cloud before her eyes. This latter trouble has only been noticed since last spring. She sleeps well. Her appetite is good; there is no dyspepsia, and her bowels are slightly inclined to be costive. There is no sphincter trouble in either rectum or bladder. There is no tendency to œdema, no nocturnal urination, no dyspepsia, no palpitation or cough. Menstruation is normal, except for slight abdominal discomfort for a day before the flow appears. She has at times some apparently causeless vertigo. There is no dysphagia or other bulbar symptom except the speech derangement.

Status præsens.—She is a well-nourished, strong-looking girl. Upon questioning her, her answers are found to come slowly, speech being somewhat chanting, with irregular pauses between the words, and a certain amount of drawling over individual sentences. There is likewise a peculiar catch in the voice. There is a constant "far away" yet concentrated look, chiefly noticeable when she is talking, at which time she appears to be looking at some distant object over the examiner's shoulder. The pupils are contracted equally, and react well to both light and accommodation. There is no contraction of the visual fields, as roughly tested with the finger. There is slight internal strabismus in the right eye. Upon entire lateral motion there is faint nystagmus, while, at the same time, there is distinct diplopia. The examination of her eye-grounds was kindly made by Dr. Cross, the ophthalmologist to the hospital, who reports slight dinginess of the optic nerve in the right eye, with some myopia in both eyes—vision, o. d., xx-70, o. s., xx-50. Her tongue is clean, is protruded properly, but there is a slight tremor in it. The teeth are in good condition. Heart and lungs normal. There is slight incoördination in the hands. Dynamometer: r; 28, l. 24. Two points of the æsthesiometer are differentiated upon the dorsum of the right hand at two inches; upon the left at two-and-three-quarter inches; temperature sense acute. There is no tremor or static ataxia; biceps tendon-reflex is absent; the spine is straight and without tender points. Down the centre of the back is a dark-brown stripe, four inches in breadth.

The gait is unsteady, waddling, and with somewhat of a fling of the feet. Upon endeavoring to walk along a crack in the floor, there is marked deviation from the straight line. Station is unsteady, much swaying being present when the eyes are closed. Knee-jerk upon both sides is much diminished, and is at times absent. There is neither ankle clonus or rigidity. Two points of the æsthesiometer are differentiated upon the dorsum of the right foot at three-and-one-half inches, of the left at three-and-one-half inches. Temperature sense acute; examination of the urine negative.

It will be seen, therefore, that this patient presents in a more or less marked degree, the characteristic features of Friedreich's ataxia. There is presumably a similar disease affecting one of the brothers. She has a markedly ataxic gait and station; the knee-jerks are almost abolished, and her speech has the peculiarities seen in other cases of this disease. The case is reported not as showing anything new, or as being an example of any extremely rare disease, but merely that I may in this way place one more case of the disease upon record.

NEURITIS OF THE SACRAL PLEXUS AND SOME OF ITS BRANCHES, AND SUBSEQUENT POLIO-MYELITIS, THE RESULT OF DIFFICULT LABOR.

By CHARLES K. MILLS, M.D.

The patient, Mrs. W., about thirty years old, in 1874, had an attack of arthritis of the left knee-joint. Her first child was born in 1880. Her first husband died in 1884, having, it is believed, infected her with syphilis, of which she had evidences in ulceration of the throat and severe headaches. She was married a second time in 1889. She was in labor July 3, 1891. The labor was difficult; it was necessary to make use of instruments, and chloroform was administered. On coming to from the chloroform, her first complaint was of severe pain in the hip, leg and foot, and from this time on she was paralyzed in this extremity and suffered severely, both with spontaneous pains in the limb and extreme hyperæsthesia over nerve trunks, on handling or jarring the limb anywhere, on squeezing the foot laterally, or in any way manipulating her so as to jar or press upon nerves. The pain at first was most marked in the back of the thigh. In a week or two it passed downward to the foot, and was most decided at the instep. It was necessary to separate her toes with cotton because of the pain, and for a long

time it was almost impossible to touch her in the limb because of the suffering it caused. This condition of pain and tenderness continued without much abatement for more than three months, when it began to decrease, and about the second week in October had almost entirely disappeared; but the leg was still left in a condition of extreme motor paralysis.

Five weeks before she was first examined she was suddenly stricken, without unconsciousness, with paresis of the left upper extremity, and some difficulty or thickness of speech. These conditions had improved slightly, but still persisted at the time of examination. They were evidently due to a cerebral attack, probably hæmorrhage or thrombosis, the outcome of her old specific trouble.

Taking the history into consideration, the examination showed some interesting points connected with the question of the occurrence from traumatism or otherwise, both of neuritis and polio-myelitis in the same case. Below the knee all movements were totally paralyzed, except those of the gastrocnemius, soleus, and posterior tibial; and degeneration reactions were present in the paralyzed muscles. The foot was swollen, purplish in color, and cold. No loss of sensation was found anywhere on most careful searching; but she had great pain on pressure at the sciatic notch and in the sacral plexus examined through the rectum. The muscles above the knee were not paralyzed; knee-jerk and muscle-jerk on both sides were normal.

Various diagnoses were made in this case, among them rheumatism and hysteria. Clearly the paralysis and pain and tenderness were the immediate result of traumatism during labor, although constitutional syphilis may have caused the trouble to spread faster and farther than it would otherwise have done. Clearly, also, this patient had a neuritis, chiefly of the upper cords of the sacral plexus and their branches in the leg; probably, also, the lumbo-sacral cord, which connects the lumbar with the sacral plexus, was involved. The point of most interest to me, however, was that the neuritis had not only descended and diffused through the entire leg to the toes, but it had also ascended until the spinal nerve roots and anterior horns of the cord were included in a destructive and inflammatory process. The paralyzed muscles below the knee were typical examples of the polio-myelitis type of palsy—helpless, atrophied, discolored, and reactionless to the electric current, but without pain anywhere in them or in their supplying nerves. Some evidences of neuritis still persisted high in the leg. It might be said that the nerves supplying the affected

muscles had recovered from the active neuritis, but had not regenerated sufficiently to cause any improvement in the motor paralysis; but I do not think that such an explanation is sufficient to clear up the case. The nerves originally involved were mixed nerves, and serious degeneration of them would have left areas of anæsthesia as well as motor paralysis. The best explanation is, that both neuritis and polio-myelitis occurred, and that the patient has not recovered from the effects of the latter.

The cerebral attack has no bearings upon the question here discussed.

DISCUSSION.

Dr. F. X. DERCUM.—I have seen one case in which neuritis followed difficult labor. Great violence had been used. The perinæum was torn through the sphincter, the sacral plexus bruised, and permanent injury was thus done secondarily to the limb. There was both wasting and loss of power. There was also some slight anæsthesia. I saw the case some eight or nine months after the labor.

Dr. JAMES HENDRIE LLOYD.—An interesting point in connection with these cases following labor is that of septic infection. Veterinary surgeons know that sometimes in the lower animals paraplegia follows labor. This has been observed in cases of inflammation of or about the womb, and is caused probably by a septic neuritis or spinal meningitis. Some, notably a leading French authority, deny that pressure is a frequent cause of these post-mortem paralyses. Certainly, if pressure caused them all, it would seem that they ought to be of more frequent occurrence, seeing how nearly identical the conditions are in the vast proportion of labors. Some years ago I dissected the pelvis to observe the relations of the pelvic viscera with the nerve trunks. A posterior position of the head would be most apt to cause pressure-palsy. The sciatic nerve would be most apt to suffer. It is rather difficult to understand how ordinarily the crural nerve, which runs along the brim of the pelvis, could be compressed by the head.

Dr. WHARTON SINKLER.—I wish to put on record an interesting case of neuritis following labor. The patient was a small woman, a primipara, and the labor was instrumental and very difficult. On recovering from the anæsthetic, she complained of severe pain in the legs, and the pain and hyperæsthesia continued for some weeks. I saw the patient in consultation about six weeks after labor. There was then contraction of the knees, and the muscles were

considerably atrophied. There was extreme hyperæsthesia, especially below the knee. There was no special pain over the nerve trunks, no loss of reflexes, and no loss of response to the faradic current. The patient recovered entirely, and in two months was walking about perfectly well. This is the only case of neuritis following labor that I have seen. It was complete and equal in both legs.

Dr. JAMES TYSON.—I came to the meeting hoping that Dr. Mills' paper would throw some light upon a case in which I am now interested. It was a case of intra-uterine columnar papilloma, operated on by Prof. Goodell, of this city. In this case the pain, which is very considerable, is entirely extra-pelvic, radiating down over the buttocks and to a slight extent to the groins. It has occurred to me that possibly the pain was merely a coincidence, and that the internal uterine growth had nothing to do with it. In the earlier history of the case the pain was abdominal.

Dr. CHARLES K. MILLS.—We may have, and that is the point of this communication, a type of puerperal paralysis which is concurrently neuritic and polio-myelitic. It seems likely that in Dr. Tyson's case the suffering is due to a neuritis involving the lower of the cords constituting the sacral plexus. With reference to septic paralysis following labor, it may be, on the other hand, that the facts that I have mentioned are overlooked. Instead of being septic these cases may be traumatic, and sometimes instances of ascending neuritis and eventually of myelitis, is of a concurrence of the nerve and cord disease.

Dr. CHARLES K. MILLS next reported a case of

VIOLENT HYSTERO-EPILEPSY AND HYSTERO-CHOREA OF THIRTY YEARS' DURATION.—EXTRAORDINARY ROTATORY, WHIRLING, THRESHING, CLAPPING AND STAMPING MOVEMENTS.

I wish briefly to call the attention of the members to this case, as although it has been my fortune to see an unusual number of cases of hystero-epilepsy, this was the most extraordinary in the violence of its manifestations that has ever come under my observation. It was a case approaching the demoniacal type spoken of by French observers, and reminded me more than any case I have ever seen of some of the mediæval instances of hysterical convulsion.

The patient, a woman, sixty-one years old, was brought for consultation from one of the interior counties of Pennsylvania. For a period of thirty years she had been having these attacks, usually of the same general type, but differing somewhat in violence, and occasionally disappearing for comparatively long intervals. For a long time before coming under observation she had been having them almost daily. Her family, her friends and physician were worn out in their efforts to relieve her. One physician, who took charge of her in his own house, in which he had a drug store, was compelled promptly to give over his ministrations to her, from the fact that in a short time she had thrown down and broken a large number of his jars and bottles, by the violent vibrations communicated from her room to all parts of the house.

I was called to see the patient at a Philadelphia hotel, where, however, for obvious reasons, she did not long remain. I found her lying on a bed—a tall, gaunt, wiry, muscular-looking woman, with a weird expression of face. After a little conversation, I had her get on her feet in order to examine her better, when, in a minute or two, her convulsive movements began. They were so violent and remarkable as almost to baffle description. Her upper extremities were first elevated to about a plane with her shoulders and contorted into grotesque positions; in a minute or two the contorted right arm began to rotate vertically around the shoulder as a pivot, the movement being accompanied by a half rotation of the head and constant twitchings and contortions of the face. These movements became rapid and violent; in a short time she sat down, and now these changed to a rapid and exceedingly violent threshing with both arms; this was interspersed at frequent intervals with claps of the hands, given with great force, so that they resounded like pistol shots. The threshing movement was then changed to an up-and-down movement of the arms, sometimes striking the knees and sometimes not, still interspersing with the violent clappings. Next the patient began to lift and stamp with both feet with great force upon the floor, jarring and shaking the building; and so went on for more than an hour a series of the most extraordinary movements of head, arms, hands, legs and feet, trunk and entire body.

Dr. F. X. DERCUM presented the following specimen:

DISTENDED INFUNDIBULUM AND ABSORPTION OF THE OPTIC CHIASM IN A CASE OF INTERNAL HYDROCEPHALUS.

I have here a rather rare specimen removed from a patient in the Philadelphia Hospital. He was admitted to the institution June 21, 1890. He was about fifty years of age. He had a scar on the scalp, produced, he said, by a bullet-wound twenty years before. He was apathetic, and memory was impaired. There was general muscular tremulousness with weakness. He stood with difficulty. The knee-jerk was greatly exaggerated; eyesight very poor. History was obtained with difficulty. It was learned that about two years before he had had severe head pains, which confined him to the bed for five months. He had no loss of consciousness or delirium. He had one convulsion. There was no fever. Since then the mind had gradually weakened. His eyesight had been failing for five years, and when he came under my observation he was almost completely blind. The left eye had failed first. There was weakness of the extremities, more marked on the left side. The case was unsatisfactory on account of the meagre history.

The patient died, and the post-mortem was made yesterday. The condition found was as follows: The calvarium was normal; the dura was much thickened; the pia and arachnoid were thickened, particularly at the base; the vessels at the base were somewhat atheromatous. What was most striking was the apparent absence of the chiasm. The infundibulum was much distended and felt like a cyst; the optic nerves terminated in this thin attenuated structure, while nothing but a trace of the optic tracts could be seen to either side; all the ventricles were found to be excessively dilated; the ependyma was velvety, and there had evidently been an internal hydrocephalus from ependymitis. The case seemed to be one of destruction of the chiasm by pressure from above. We have not yet had an opportunity to make a microscopical examination of the specimen, and until then a more detailed report must be deferred. The specimen is, as already remarked, very extraordinary, and is shown in its fresh condition.

Stated Meeting, December 28, 1891.

The Vice-President, Dr. WHARTON SINKLER, in the chair.

Dr. S. WEIR MITCHELL read a paper entitled

A CASE OF ACROMEGALIA.—THE PATIENT EXHIBITED.

BY DR. H. A. HARE, M.D.

I have brought this patient before you as an interesting instance of that rather rare disease known as acromegalia; and while the condition has not progressed in all its details sufficiently to enable me to state positively that this is a typical case, our limited knowledge of the disease under consideration seems to me to point to this being an undoubted instance of the malady. It has been suggested to me by Dr. Stewart that the case is one of myxœdema, but I am unable to think that she presents in any respect evidences of this curious condition. In the first place she lacks the characteristic slowing of the speech, neither has she the slowing of the mental processes or of the gait. Atrophy of the thyroid gland is an almost characteristic lesion of myxœdema; whereas in the case which we have before us the thyroid gland is very much increased in size. Neither is the facial expression of the woman characteristic of myxœdema. There is, as you see, a general enlargement of the tissues of the face, and associated with the increase in the development of the soft tissues there is certainly an increase in the size of the bones practically all over the body. There are a number of bony enlargements in excess of the symmetrical development of the chest. Anteriorly, on the right side, near the sternum, you will notice that the second, third and fourth ribs are much increased in their length, and an examination further shows that the three lowest ribs on the left side are similarly increased in size. The tissues of the limbs, both upper and lower, are increased also, and the patient has, during the past two years, gained sixty-five pounds in weight, although, as you see, no one would at the present time consider her to be a stout woman. The curve in the spinal column and the rounding of the shoulders exactly resembles that which is seen in all the cases of acromegalia

so far reported, which have been well developed, and the expression of the face so closely resembles the expression seen in the picture in Leite's recent thesis upon this subject as to cause the remark that the two patients look enough alike to be brother and sister, or even to be twins. Associated with the general symptoms there is complete loss of vision through atrophy of the optic nerve on the left side and during the last two or three weeks there has been marked diminution in the vision of the right side, which ophthalmoscopic examination proves to be due largely to what is probably an axial optic neuritis; there is also paralysis of the inferior oblique muscle on the left side.

Finally, in regard to the possibility of the case being one of myxœdema, let me say that she lacks practically every symptom of this disease except the increase in the subcutaneous tissues, and that she has not the supra-clavicular swelling which is generally found in the malady described so thoroughly by Dr. Ord.

Dr. G. E. DE SCHWEINITZ.—Through the courtesy of Dr. H. A. Hare, and Dr. Hansell, I examined this case. It is unnecessary to repeat the result of the examination, which coincides in all practical particulars with the one reported by Dr. Hansell. I may, however, refer to one point that is interesting, namely, the very marked failure in the perception of green, and the fact that there is a faint, negative scotoma occupying the centre of the field of vision, in which area this color ceases to be appreciated. It reminds one a little of the scotoma in toxic amblyopia, and suggests a line of inquiry. The whole appreciation of the color green, however, is so very deficient that it is difficult to determine the limits of this scotoma. In addition to this case I have examined one other case of supposed acromegalia, in which there was bilateral temporal hemianopsia, a lesion which has been seen in a number of cases of this affection, because there has been disease of the pituitary body, which from its anatomical situation would necessarily produce this defect in the field of vision. From the account of the way in which vision was lost in the blind eye of Dr. Hare's case, it seems as if it had begun as a hemianopsia, although the field of vision of the right eye does not show this character. In one case of suspected tumor of the pituitary body which I have observed, but which was not examined post-mortem, there was excessive sweating, especially of the hands and feet. A somewhat similar condition is present in the patient who is here to-night.

Dr. JOHN CHALMERS DACOSTA.—Would the absence of any special evidence of mental involvement negative the presence of myxœdema? In the two cases of myxœdema that I have seen, the mental involvement was not coincident with the development of the disease. The mental condition in the case we investigated was one of gradually arising and progressive dementia. It was scarcely manifest until the myxœdema had existed for some time.

Dr. F. A. PACKARD.—I am especially interested in this subject because this year I came across a case which I at first thought to be one of this disease. I, however, learned better, and had hoped to be able to show here an interesting example of the disease which has been called by Marie, osteo-arthropathe hypertrophiante pneumique. It has been claimed that this is the real disease from which many cases of so-called acromegalia suffer. Since the appearance of the paper by Marie in the Révue de Médécine, 1890, quite a long monograph has appeared in Germany, giving the results of the post-mortem examination in Friedreich's case of Hagner, where every bone in the body was found tremendously enlarged.

In Dr. Hare's cases there is absence of the large inferior maxillary, which is a prominent symptom in many of the reported cases. There appears, also, to be very little enlargement of the bones of the hands. The enlargement seems to be chiefly in the soft parts, much like that which occurs in myxœdema.

A CASE OF ACUTE MYELITIS OF THE DORSAL CORD.—EXHIBITION OF THE PATIENT.

BY DR. WHARTON SINKLER.

Edward Jones, æt. forty-one; married; born in England; occupation, laborer in bolt and nut works. He has never had any serious illness and denies any venereal disease. He has been a moderate drinker, but smokes excessively. He has lost the right eye—by an accident he says, four years ago. Patient applied for treatment at the out-service department of the Infirmary for Nervous Diseases October 5, 1891. He states that two weeks ago he was intoxicated, that it had not been his habit to drink heavily, but on this occasion he was much under the influence of liquor at night. He felt no ill effects from it, but a week later, that is on Monday morning, Sept. 28, he found on coming down stairs that his legs were weak; that although he could walk, he

was not able to go to work. He had no pain in the legs or back and no numbness or formication in the legs, but there was slight numb feeling in both hands. He had no illness or indisposition of any kind preceding the loss of power in his legs. He walked dragging his legs and shuffling along the floor, the chief difficulty seeming to be in the flexors of the thighs. He stood with eyes shut without difficulty although there was some sway even with the eyes open. The knee-jerk was absent and not reinforcible. The elbow-jerk was also absent. There was some slight incoördination in the movements of his hands apparently due to weakness. Sensation to touch and localization in hands good. Dynamometer, right 120, left 115. On examination of the spine it was found straight; no pain or tenderness on percussion or pressure, and all of the movements of the trunk were free. The muscular condition over the body is good. There was no wasting and the muscles everywhere responded normally to the faradic current. There was no loss of power in the bladder or rectum. The heart sounds were normal. The pupils moderate in size and reacted to light and to accommodation. He was ordered to take fluid extract of ergot, half drachm three times a day. One week later his wife came to report that his condition was very much worse; that he was unable to walk or indeed to support himself on his feet. He was therefore admitted to the hospital October 13, 1891. On admission the following note was made: The patient is unable to stand, but he can move his legs in every direction feebly, and as if they were very heavy. Sensation is everywhere perfect, both in the hands and in the legs, the sharp point of a pin being readily distinguished from the head. Power of localization also good. Tendon reflexes entirely absent. He has good control over anal and vesical sphincters. He has no headache or dizziness, and has had no convulsions. His sexual appetite is lost and he has no power of erection. He sleeps well and has a good appetite. He can flex the legs when in a recumbent position, but he is unable to do this if even slight resistance is offered. The skin of the soles of his feet is dry and harsh. The plantar reflex is present as is the cremasteric. The electrical examination shows no loss to the faradic current. Patient was ordered rest in bed, massage, and the ergot to be continued. On October 26, patient had lost strength still farther. He was barely able to move his legs in bed, but there was no loss of sensation, although the compass points are not differentiated at less than two inches on the soles of his feet. There is no pain, aching or numbness felt

in the legs. Three days ago there began to be loss of power of the bladder. This was relieved temporarily by hot fomentation over the abdomen. To-day he complains of violent pain in the rectum with involuntary movements of the bowels. He has complete loss of control over the sphincter ani. Examination per rectum shows relaxation of the sphincters and the bowel filled with a soft fæcal mass. The paroxysms of pain in the rectum were so severe that the patient had to be kept under the influence of opium for several days. Sometimes an opium suppository was sufficient, and other times a hypodermic injection of morphia was necessary. There was paralysis of the bladder and the urine was drawn by catheter twice or three times in the twenty-four hours. November 1, the ergot was discontinued and iodide of potassium, ten grains three times a day, was ordered, the dose to be increased by one grain three times a day. The patient's temperature was not above normal. He became very much prostrated generally, and was unable to take any but liquid nourishment on account of anorexia. November 20, there was improvement in his condition. The attacks of pain in the rectum were not so frequent, and the power of the bladder had been regained. He was able to move the legs rather more strongly. The patient's condition improved steadily from this time onward, and by December 1 he had entirely regained control over both anal and vesical sphincters. On December 25 he was discharged from the hospital, and he was able to walk well and without dragging the feet or stumbling. He stood firmly, and there was no sway while the eyes are open, but when the eyes are closed there is a slight sway, hardly more than normal. The knee-jerk could be reinforced, but was absent without reinforcement. The muscles were firm, and were not wasted, and they responded freely to the faradic current. The treatment during the last six weeks in the hospital consisted in the administration of the iodide of potassium in ascending doses; the maximum dose reached was fifty-four grains three times a day. Massage and the faradic current were used daily.

On exhibition of the patient he walked without difficulty, and seemed to have entirely regained his muscular power. The knee-jerks are slightly present, but are marked by reinforcement.

This case was of interest to me from its resemblance to one which I reported to the American Neurological Society, and in which Dr. Burr made a microscopical examination. In this case there was paralysis of the legs, rapidly extend-

ing to the upper extremities and face, the patient dying of respiratory paralysis. At the autopsy we found not a poliomyelitis, as I had anticipated, but a diffused transverse myelitis of the cervical cord. It seems to me that in this case there might have been a similar condition, and that the hyperæmia or myelitis did not go so far as to cause degeneration of the nerve-cells of the anterior horn.

Dr. WILLIAM J. HERDMAN, of Ann Arbor, Michigan, who was present, exhibited, by invitation, photographs of a case of intra-cranial tumor. The case came into the University Hospital (Michigan) a year ago. The symptoms very closely resembled those of glosso-labio laryngeal paralysis. There was also decided paralysis of the limbs. She could sit erect in a chair, but could not get about. She had scarcely any pain. The tumor was as shown, at the base of the brain, and had involved the fifth nerve on the right side. The gasserian ganglion was eroded away. Another peculiar thing was that although two ophthalmological examinations were made, no changes were found in the retina. Yet she had loss of sight of the right eye and the tumor must have caused serious obstruction of the circulation on that side. The tumor had caused erosion of the petrous portion of the temporal bone. The exact nature of the neoplasm, which was subdural, had not yet been determined. It was thoroughly encapsulated by a layer of fibrous tissue, but in removing it the sac burst at one point, and caseous material escaped resembling that seen in degenerated tubercle deposits, yet there was no evidence of tubercular disorders in other parts of the body.

Stated Meeting, January 25, 1892.

Dr. CHARLES K. MILLS, in the chair.

A FURTHER REPORT UPON THE USE OF BROMIDE OF AMMONIA AND ANTIPYRIN IN EPILEPSY.[1]—ABSTRACT.

By CHARLES S. POTTS, M.D.

Since the first report was made upon this subject in the "University Medical Magazine," for October, 1890, thirty cases have been treated by this method, with the following results: eight did not return after the first visit and three received no benefit. The following cases are reported as having been remarkably benefited.

CASE I.—P. McK., male, æt. thirty-two. Had been having one spell a week since childhood; he has been under treatment by this method for two years and has had but thirteen spells of lessened severity.

CASE II.—W. S., male, æt. thirty-two, first spell three months ago; has had twelve since. Number of spells reduced to four in nine months.

CASE III.—H. S., male, æt. fourteen. Has been having six seizures a week for past three years. Under treatment; had eleven spells during first six months; further reduced to but one during the following year.

CASE V.—W. R., male, æt. twenty-five. Seven to eight spells a week since infancy. During five months' treatment averaged seven fits a month.

CASE VIII.—W. R., male, æt. thirty-one. Has been having very frequent epileptic seizures since he was three years of age. These were reduced by the treatment to eighteen of decreased severity in a year.

CASE IX.—G. H., male, æt. twenty-three. First spell three years ago; has averaged one a month since. During a period of nine months has had no spells, and describes himself as "enjoying the best of health."

CASE X.—E. Y., male, æt. fifteen. Had one severe spell a month and about twelve "light ones" every day; at end of two months he was averaging one mild spell a day. Had gained flesh and mental condition was improved.

CASE XIII.—Female, æt. three. Number of spells reduced from three a week to two in a year.

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[1] Published in University Medical Magazine, February, 1892.

CASE XIV.—Female, æt. two-and-a-half. Three to four spells a week; no relief was afforded during first three weeks of treatment, at the end of which time improvement commenced, and when last heard from she had had no spells for six months.

The advantages claimed for this combination are, First, that it exercises a most powerful influence in decreasing the number of epileptic paroxysms. In the majority of the cases treated the average number of seizures had either been stationary for some time or was increasing, and they had previously been treated with other drugs. Second, that when a seizure does occur it is of much lessened severity. Third, while lessening the number and severity of the seizures, it does not do this at the expense of the remaining physical and mental health of the patient. The doses used were of antipyrin, eight grains, ammonium bromide, twenty grains; children in proportion.

TREATMENT OF EPILEPSY BY ANTIFEBRIN AND SULPHONAL.

Dr. HINSDALE made a report of the use of antifebrin in epilepsy at the Infirmary for Nervous Diseases. Better results were obtained in the lesser epilepsies in which bromides failed than in the greater epilepsies. One case was reported in which bromides made the condition worse, while antifebrin kept the attacks down to such a number as to make it possible to follow his vocation as a compositor. He took from ten to twenty grains three times a day for three years, and excepting an appearance of slight cyanosis there was no evident disadvantage in its use.

Nine other patients were temporarily benefited by antifebrin, but eventually were compelled to return to bromides.

Sulphonal was used in a large number of cases, seven of which were reported as having been under treatment a sufficient length of time to form an estimate of its value. The dose employed was from three to six grains three times a day, and the period of treatment varied from one month to ten months.

In one case, Maggie E. R., aged twenty, epileptic attacks occurred weekly. Duration of seizure variable, from one minute to one hour. Convulsions general. *Petit mal* two or three times daily. Sulphonal in three or six grain doses thrice daily mitigated the severity of the attacks and reduced them in frequency, so that after three months and a half of treatment only one attack had occurred during a

period of eight weeks. She is at present taking five grains of sulphonal three times a day.

Besides these a large number of other cases of epilepsy were treated with sulphonal. The results were variable; temporary improvement was usually noted, but in many instances the patients failed to continue its use for a sufficient length of time.

The dose for children is three or four grains, and for adults, six or eight grains, three times a day. Frequently patients are made sleepy by the use of sulphonal in these amounts. In that case two doses daily may be given.

The best results from sulphonal are in those cases where bromides cause so much skin trouble or mental disorder that their quantity must be lessened or altogether suspended; then sulphonal becomes valuable.

DISCUSSION.

Dr. FRANCIS X. DERCUM.—I have had the opportunity of observing both methods of treatment—that employed at the University of Pennsylvania and that used at the Infirmary for Nervous Diseases. The mixture of bromide of ammonium and antipyrin acts differently from either drug alone. Certainly antipyrin by itself will not decrease the number of attacks, and antifebrin will do it only occasionally. When antipyrin is added to the bromide it increases its efficacy. In this way a much smaller dose of bromide need be given and thus the liability to acne and bromide dementia is lessened. At a recent clinic, Dr. H. C. Wood mentioned a peculiarity which he thought that he had observed in those patients who took antipyrin and the bromide for a long time, and that is that there seemed to be a lessening of the heat-producing power. Such patients found that they had to dress more warmly than before, even quite heavily in comparatively warm weather.

When I spoke to Dr. Hinsdale of sulphonal as second to the bromides, I meant bromide mixtures in general. Sulphonal has, in my experience, a decided value in diminishing the number of epileptic attacks. I can recall, however, several cases in which the attacks of epilepsy recurred as soon as the dose of sulphonal was diminished short of an amount necessary to cause drowsiness. If in a given case four or five grains were sufficient to produce drowsiness, no attacks would occur as long as this dose was continued, but the moment the dose was lessened the attacks recurred; and in a few instances when the sulphonal was kept up in full dose, the attacks would occur after a time with great vio-

lence, although their onset had been delayed. However, in a number of instances I have succeeded in markedly diminishing both the violence and the frequency of the seizures by very moderate doses of the drug, and its chief value seems to be that it can be administered for quite long periods in place of the bromides thus enabling the patient to rally from the depressing effects of the latter. I have had four or five cases in which I alternated between sulphonal and the mixture of bromide of ammonia and antipyrine successfully for long periods. The prolonged administration of antipyrine apparently has no bad effect. But after it has been given for a time it is well to alternate with some drug that has less power.

Dr. D. D. STEWART.—Would not some other bromide answer as well in this combination as that of ammonium? The ammonium salt is the worst tasting of the bromides. I have used potassium bromide with antipyrin with advantage. I have found this combination singularly efficacious in a girl who was having frequent attacks. She had been under my care for about a year and I had tried almost everything without effect, until I put her on eight grains of antipyrin with twenty grains of potassium bromide. Under this treatment, she had in a period of two weeks, only one light seizure, although prior to this she had from three to eight attacks a day, notwithstanding she was taking large doses of potassium bromide.

I would ask if there is not some danger from giving sulphonal in doses of six or eight grains, three or more times a day, for any length of time? I believe that nephritis has been observed to follow the use of sulphonal.

Dr. J. MADISON TAYLOR.— I testify gladly to the value of antipyrine in combination with a bromide. I would like to know of any good reason why the bromide of ammonium is thought best to go with it, however; that of lithium has served me well in this connection. In a few instances this mixture has wrought most satisfactory results at my hands; not curative but largely palliative and promising even better.

Sulphonal has disappointed me. The cases Dr. Hinsdale relates are well known to me at Dr. Mitchell's clinic where we hoped much from this drug. In certain instances there antifebrin gave excellent results causing, however, a steady cyanosis at times which seemed menacing, but really working no hurt. There are yet combinations to be learned which promise better than any single drug.

Dr. JAMES HENDRIE LLOYD.—We hear a great deal about the poisonous effects of antipyrin. I would be glad

to hear the opinion of those who have used antipyrin for a long time; does its use lower nutrition or tend to impair the vitality of the patient? I have myself used antipyrin to a considerable extent, but I have failed to convince myself that it has any serious effect in ordinary doses. Certainly its dangers are not so great as are popularly supposed. Have there been any studies made of the blood after the use of antipyrin? I saw recently a statement, which was not substantiated, that antipyrin has not only a depressent action upon the nervous system, but also a disturbing action upon the nutrition and composition of the blood.

Dr. JOSEPH LEIDY.—Some three years ago I reported a series of cases of epilepsy and other neuroses treated by the use of antipyrin and antifebrin. Several of these cases were under the care of Dr. Wood. It was found that antifebrin proved more efficacious than antipyrin. In one case under treatment for several months antipyrin was used in quite large doses, as much as sixty grains a day. It diminished the number and the intensity of the attacks, but as soon as the drug was withdrawn they recurred with great frequency. I think that thirty-one cases were reported, in four the attacks were considerably lessened by antipyrin, but in the others the drug had no effect. Upon the lesser epilepsies, antipyrin seemed to have considerable effect. In the majority of cases of *petit mal* the attacks were not only diminished, but were completely obliterated during the time that the drug was used. With antifebrin the results were better, in many of the slight epilepsies the attacks did not return after four or five months. I know of no case.

Dr. W. H. BOCHROCH.—At the nervous department of the Northern Dispensary four cases of epilepsy are under treatment with antipyrin in combination with bromide of ammonium, or bromide of potassium. In all there has been a diminution of the number of attacks, and in two there is reason to hope that the attacks will remain away for some time. Two cases have been under observation for four months, and they show no change in nutrition.

Dr. THOMAS J. MAYS.—I have had considerable experience with the administration of antipyrin, phenacetin, and antifebrin, and have given these agents for long periods. I think that there is a view abroad that these agents are depressent and really toxic. I think that this view is not borne out by anything that we know in the way of experimental research or clinical observation. Some have a horror of giving these agents in fever on account of the fear that they cause depression of the heart and collapse. Ex-

periment on animals show that these agents do not have a depressing influence upon the heart. If there is any influence at all, it is to cause elevation of the blood pressure. I have given phenacetin and antifebrin for long periods. I have one patient who is under observation at the present time who has taken three or four grains, four times a day, for more than a year without any toxic effect that I can see, and the disease for which it was given, namely asthma, has entirely disappeared. I have given antifebrin in enormous doses to phthisical patients—as high as eighty grains a day for six or seven days. This is an agent which you cannot give in large doses for any long period. I used it to depress temperature, but at the end of this period I have suspended it on account of the cyanotic appearance which it calls forth. This is not a true cyanosis, but a discoloration partly due to the decomposition of the blood. Antipyrin can be continued for about three weeks, when it produces an uncomfortable, distressing rash.

Of the three agents mentioned, I think that phenacetin is the least likely to cause trouble, antifebrin has to be suspended on account of the discoloration, and antipyrin on account of the urticaria-like eruption, and even the ulceration of the skin which it produces when it is continued more than three weeks in seven-and-a-half grain doses repeated every four hours. My experience has not been such as to make me think that these agents are depressent, but of course, if given in excessive doses they will depress just as well as other agents.

Dr. FRANCIS X. DERCUM.—I have given antipyrin in ten grain doses four times a day for a very long period, but have never observed any rash, I should regard this as rather the exception than the rule.

Dr. CHARLES K. MILLS.—I have used antipyrin, antifebrin, sulphonal and most of the other remedies which have been recommended, but I have invariably been driven back for most cases to the combination to which I resorted many years ago, that is, of the bromides with Fowler's solution and conium. This in the majority of cases gives the best results. Of course with all of these drugs you have to use nutrients and tonics.

Dr. JOSEPH LEIDY.—I should like to report the results of a *post-mortem* in a case of death after the use of large doses of antipyrin. The patient was a man of forty-five or fifty years, who for about five weeks had been given antipyrin for epilepsy. The number of attacks diminished considerably, there was marked cyanosis which was in-

variably found after the use of antipyrin, and was more marked with antipyrin than with antifebrin, but I do not remember the occurrence of a rash during or following the administration of these drugs. At the autopsy this case showed great congestion of the brain with œdema at the base. The internal organs also were congested. It was the opinion of those who had had this case under observation that death was due to this action of the drug, and in all probability to a direct action upon the hæmoglobin of the red-blood corpuscles. The blood of the epileptic cases was also examined, to determine the amount of hæmoglobin, and also the number of corpuscles. Antipyrin seemed not only to diminish the number of corpuscles, but also the percentage of hæmoglobin. The corpuscles were reduced to three or three-and-a-half millions in the cubic millimetre, and the hæmoglobin to seventy or eighty per cent.

Dr. C. S. POTTS.—Our reason for using the bromide of ammonium is that Dr. Wood believes that it has a more powerful influence than the other bromides, and from some comparative trials made, such seems to be the case. In none of the cases in which I have given the bromide of ammonium and antipyrin, have I seen any bad effects. Those cases that were reduced in health have improved.

I should like to read the report of a few cases treated in this way by Dr. Hay, at the State Asylum for the Insane at Morris Plains, N. J., and published in the "Medical Age," July 25, 1891.

Male, æt. forty-five. For eight months previous to the commencement of this treatment he had, on an average, thirteen convulsions a month, all extremely violent, and attended by pre-epileptic mania of short duration. During this time he was taking nitro-glycerine gr. $\frac{1}{100}$ four times daily. In October he was placed upon bromide of ammonium, gr. xx, with antipyrin, gr. vii, and at the end of one month the antipyrin was increased to gr. x in each dose. In all he took this combination three months with the following result: during the first month he had twelve seizures; during the second, nine, and during the third month, only three fits. The character of the fits was modified favorably, and he was far less violent than usual.

Male, æt. thirty. In eighteen months previous he had an average of twelve convulsions a month, during which time he was given antifebrin, gr. viii three times a day. He was placed upon antipyrin and bromide of ammonium, and it was continued three months and a half, during which time he averaged eight fits a month.

Male, æt. thirty-eight. Convulsions date back fifteen years. He has unusually violent attacks, with acute mania preceding them for some hours. After a succession of fits he would fall into profound coma lasting generally four days, after this the man would be dazed and stuporous for a few days more, when he would become sane, and remain so until the next attack. He had received a prolonged course of the bromide of sodium and other drugs without any favorable result; during the three months the antipyrin and bromide of ammonium was administered the attacks were mild, unattended by mania, and only followed by a slight degree of coma.

Male, æt. forty-six years. Epileptic since ten years of age; six years ago began to be maniacal at his convulsive periods, which occur two or three times a month; had been treated chiefly with the bromides; during the previous six months he had had twelve convulsions; during the three months he was given the antipyrin and bromide of ammonia, he only had one convulsion, which was unattended with mania.

Male, æt. eighteen. For thirteen months prior to trying this mixture, during which time he was successively treated with the bromides, ergot, nitro-glycerine and antifebrin, he had an average of seventy-four convulsions a month. He was given antipyrin, gr. viii, and bromide of ammonia, gr. xx to i.d., and for *the first time* a reduction in the number of fits occurred, the average number per month for three months falling to sixty.

REPORT OF AUTOPSY ON A CASE OF THORACIC ANEURISM IN A PATIENT PRESENTED TO THE SOCIETY FOR DIAGNOSIS SOME MONTHS BEFORE DEATH.

By Dr. THOMAS J. MAYS.

J. E., aged forty-eight. Park policeman; was sent to me for examination by Dr. Chas. K. Mills, October 28, 1890, and from him I obtained the following history: For about two years he had been subject to very acute pains around the left base of his chest, which seemed to be of a more or less intermittent character. Exercise produced shortness of breath, and also seemed to excite and produce this pain. There was no dysphagia or dyspnœa when his body was in the recumbent position; and no pain in the anterior portion of the chest. Occasionally he had a hacking cough, very little expectoration, and never had hæmoptysis. His appetite was good, bowels regular, and his pulse 100. Had no venereal disease except gonorrhœa, which was followed by

rheumatism. During the previous five months he lost twenty pounds in weight. His family history was entirely negative.

Physical Signs.—On inspection, and palpation I found a pulsating prominence in the left infra-clavicular region, and at the junction of the first intercostal space with the sternum there was a marked dull area, of about one-and-a-half inches square, which shaded off to the left, and downwards into diminished percussion resonance. Over the dull area there was audible a diastolic murmur, which was transmitted from an aortic regurgitation, which also existed. There was no murmur anywhere else. There was no asynchronism between the two radial pulses, or between either radial and either carotid pulses, and none between the apex impulse and the femoral pulsation. I must say, however, that the two last pulses were not compared after the first examination, and that if this had been done a difference might have been discovered subsequently.

In the upper part of the left lung the respiratory sounds were partially suppressed, and some sibilant râles were heard in the same area.

In the following two weeks I saw him three times, during which period he developed a sharp croupy cough, and became subject to pain in the upper part of the left chest, which radiated down his left arm. He died May 29, 1891, and the following day Dr. John C. Heisler made a *post-mortem* examination and found the following conditions:

Both pleuræ adherent; right more so than left. Left pleural cavity filled with recent dark blood clots. Left lung crepitant at base and apex, but congested in middle portion, and the whole was very much atrophied.

In the latter area there were several hæmorrhagic infarcts. Right lung was consolidated at the base, and congested throughout the upper portion. There was no breaking down, or excavation in either lung.

The pericardium contained about a gill of serum; size of heart normal, with the exception of a slight hypertrophy of the left ventricle. There was a leak in the aortic valve.

An aneurism, about the size of a fist, which had ruptured and emptied its contents into the left pleural cavity, involved the left transverse and descending portion of the arch of the aorta, without implicating the subclavian artery, and contained organized and recent clots.

Additionally there were also erosion and partial perforation of the second and third dorsal vertebræ, and some erosion of the necks of the second and third ribs.

Dr. CHARLES K. MILLS.—I brought this patient to this Society about seven months before his death as a case of

probable lesion in the posterior mediastinum. His history has been published in THE JOURNAL OF NERVOUS AND MENTAL DISEASE, December, 1890. The first symptom complained of was pain under the left scapula, and was almost the totality of his symptoms when he came to me. The question of exploratory operation was considered. He lost flesh and developed other symptoms, one of which was unilateral sweating. He was examined by a number of the members present, and a number of diagnoses given. Thoracic aneurism was first suggested by Dr. Mays, but unfortunately he changed to tumor in the posterior mediastinum. Among the diagnoses suggested were aneurism, local neuritis, tuberculosis, a small unilateral growth, and local meningeal inflammation. The greatest interest in this case relates to the study of the early symptoms. The patient had passed through the hands of a number of physicians, but a correct diagnosis was not made, although the possibility of aneurism was considered.

Dr. FRANCIS X. DERCUM.—It is interesting to recall that one of the symptoms which suggested to Dr. Mays' correct diagnosis in this case was the presence of slightly unequal pupils. The localized character of the pain and the absence of general symptoms were highly suggestive of a growth. Regarding the want of asynchronism between the various pulses, I would suggest that in a case so obscure as this studies should be made with a Marcy tambour apparatus.

Dr. JAMES HENDRIE LLOYD.—It will be remembered that this man had no symptoms of pressure on the cord. He had nothing but the irritative symptom of pain in the course of one nerve. We should also bear in mind that unequal pupils may occur in lesions of the cord high up, so that this sign may lose its value in some cases for distinguishing aneurism from an obscure cord lesion. I think that those of us who examined this man may claim at least some credit for conservatism shown in advising against operation. While an accurate diagnosis was not made, and perhaps could not have been made from the few symptoms present, there was some temptation to advise an exploratory incision, which temptation fortunately was resisted.

Dr. D. D. STEWART.—I recently made an autopsy in a case of aneurism in which the cord in its membranes lay bare in the sac of the aneurism, without there being any signs of myelitis. The man had simply irritative symptoms. There was a girdle sensation on that side, a slight area of anæsthesia, both knee-jerks were increased, and there was great increase of the reflexes about the abdomen.

Stated Meeting, February 22, 1892.

The President, Dr. F. X. DERCUM, in the chair.

INFLUENCES MODIFYING THE OCCURRENCE OF CERTAIN NERVOUS AFFECTIONS IN THE UNITED STATES.[1]

BY GUY HINSDALE, M.D.,

Lecturer on Climatology in the University of Pennsylvania.

IT is a prevalent opinion that nervous diseases have been during recent years much more prevalent in the United States than formerly. The increasing physical and mental strain incident to the conditions of modern life is a well-recognized factor in the production of these diseases, and many think that our climate has much to do in developing an intense and over-eager activity, and that it renders work somewhat more trying than in other countries.

Just how far this is true it is difficult to state accurately, and it is not always possible to secure the necessary data, or, when they are presented in the form of statistics and emanating from official sources, they must be accepted, if at all, with great caution. In a long series of years the changes which occur in the nomenclature of vital statistics are very great, not to speak of the looseness which prevails even in our older states in recording the fact of death and its cause. In the recent census no effort has been made to give for all the states the number of deaths from individual forms of disease, but in those states and cities in which there has been a satisfactory registration this has been done. Unfortunately in Pennsylvania, with the exception of a few large cities, the system of registration of vital statistics is so imperfect, and in many counties so absolutely ignored that studies of the comparative prevalence of disease in various portions of the State are not possible. It is high time that Pennsylvania be put on an equality with other States in this regard.

If we accept government statistics we will not find any very alarming increase in the number of deaths from nervous disorders. The census reports are as follows:

1850,	23,668	deaths	from	nervous	disease,	or	1	death	to 980	living persons
1860,	40,216	"	"	"	"	"	1	"	to 782	" "
1870,	60,455	"	"	"	"	"	1	"	to 638	" "
1880,	81,905	"	"	"	"	"	1	"	to 512	" "

It was at one time frequently stated that there was an apparent increase of nervous disease in certain cities of the United States of which Chicago is a type. But whatever differences may be apparent this discrepancy may be explained by the variables which must be taken into account in any statistical investigation. For example in the newer cities as a system of registration of all vital statistics is perfected the results are more and more comparable with those reported from older cities. It should be borne in mind in making such comparisons that the population of western cities, and especially the newer ones, is made up of quite different elements from those composing a city founded over two hundred years ago. In new cities there are relatively far more adults and fewer children than in New York or Philadelphia. As time passes, however, these differences undergo correction.

If we compare the prevalence of such a disease as apoplexy in the East with its prevalence in the West we find that there is more than twice as much apoplexy in New York as in Chicago; for in 1880, in 10,000 of population, 2.08 died of that disease in Chicago, while 4.93 died in New York.

It is quite possible that various causes have combined to produce some increase in nervous diseases in recent years, but proof is lacking to show that they have increased to anything like the extent frequently asserted. The accumulation of wealth in cities is often attended by great mental excitement, and renders possible excesses of food and drink which readily account for the slight excess of deaths from apoplexy in towns as compared with rural districts. To afford an explanation of the low rate from this disease in Chicago we must remember that, in general, the active men of

that city are still young men, or in middle life, and that the older men have not led lives of ease and self-indulgence.

It is also commonly believed that insanity is on the increase. Fortunately we are able to show that, on the contrary, in Pennsylvania at least, there has been an actual decrease in insanity during the last ten years. Previous to this period we cannot speak with accuracy, for it is only within recent years that the State has asserted herself in seeking out these unfortunates, compelling their proper care and providing accommodations at public expense for this large class. Many such persons were kept at home and the nature of their disease suppressed as far as possible.

In 1880 there was one insane to every 615 persons
" 1890 " " " " " " 620 "

The actual decrease amounts to one four-hundredth of one *per cent.* This shows that the mental state of the citizens of this commonwealth at least is not deteriorating. The accuracy of the diagnosis of insanity is not modified by changes of nomenclature, differences of opinion, and other causes of error that obtain in the diagnosis, and consequently in the record of other disorders of the nervous system.

Upon comparing Pennsylvania, a typical eastern state, with a western state like Minnesota inferences with reference to these matters may be seriously misleading. The very large Scandinavian element in the population of this State enters into the question. Unrestricted immigration has brought into certain northwestern states vast numbers of Scandinavians not all of whom, by any means, are the hardy, intelligent, self-supporting people that we are accustomed to meet with from Sweden and Norway.

I am informed[1] that the Scandinavian race, as observed in this country, are especially susceptible to home-sickness; that a large number of them find that the demands for the necessaries of existence, the activity and competition characteristic of social and industrial life

[1] Through the courtesy of Dr. H. A. Tomlinson, of the Minnesota State Hospital for the Insane, St. Peter, and H. H. Hart, Esq., Secretary of the Minnesota State Board of Corrections and Charities.

in America are more than their limited capacity can cope with; and that the degenerative class in the population of the State of Minnesota for example, is steadily increased from this source. Thus there has been a relative increase of insane population in that section of the country out of proportion to the increase of general population.

To show how serious a matter has been this influx of a weak-minded population in Minnesota, it is only necessary to state that while the Scandinavians form about 16.5 per cent. of the population of the State they contribute 28 per cent. of the inmates of the insane asylums.[2] The somewhat greater proportion of adults in the immigrant population no doubt slightly raises their proportion of insane, but the increment of asylum population from this source is steadily increasing throughout Minnesota.

It may therefore be well understood that any increase of insanity which has been observed is not so much due to causes operating upon the native population, but from the "influx of defective immigrants who break down mentally after coming to this State.[3]"

But whatever may be the course of nervous diseases in this country the cause will be readily found in the excesses or errors committed through recklessness or ignorance of the laws of health. It is not necessary to mention the long category of such causes of disease. At any rate the American climate, if we may use such a term, shares but little of the responsibility.

The points which I wish to make are: (1) that nervous diseases are probably not increasing at least to any very alarming extent; (2) that insanity in Pennsylvania, for example, shows a very slight decrease in frequency; (3) that

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[2] Third Annual Report State Board of Charities and Corrections, Minnesota, 1889, p. 123.

[3] The influence of an altered diet in causing insanity is shown in the case of "a young man who had been accustomed in Norway to eat large quantities of coarse food, such as cabbage, turnips, etc., with very little meat. Upon coming to this country and being introduced to a farmer's table he ate great quantities of meat, rich gravies, pastry, etc., resulting in a complete derangement of his digestive apparatus and finally ended in insanity."—Private Communication from H. H. Hart, Esq., St. Paul.

statistics regarding the less-firmly established states are liable to variables which make conclusions unsafe; (4) that whatever increase of nervous disease may be observed will be found to have other causes beside those of a climatic nature; (5) that we must recognize that the various elements of climate such as altitude, barometric changes and variations of temperature produce physiological effects; (6) that in choosing a locality to promote health, especially in the case of nervous disease, too much stress must not be placed merely on meteorological conditions. The manner of life and effect upon the mind must be strictly regarded, and more may be expected from these agencies than from what are generally understood as factors of climate in and of themselves.

To illustrate the latter statement I wish to add my observation of two cases, one a well-known physician, and the second a theologian.

CASE I.—"I went to Colorado in February, 1880, returning to Philadelphia, February, 1881. I was driven away from my work by sleeplessness, which kept me from fixing my mind for any length of time on scientific matters in the daytime. I roughed it from the moment I arrived there, lived on a ranch, herded cattle, hunted antelopes, traded horses, trapped and cooked for a "round up," in short, lived the roughest kind of a life. I think it was the peculiar life there, rather than the peculiar climate, which resulted in rapidly restoring me to health. The air, however, is very bracing and the climate thoroughly pleasant. And, although the temperature in winter sometimes varies greatly, one feels it less than in the East on account of the extreme dryness of the atmosphere. I think the most satisfactory life in the State of Colorado is on a cattle-ranch on the plains. Sheep-ranche life is miserable, so is a life in the mines in the winter."

CASE II.—A clergyman sends me this testimony: "You have asked me to tell you why I did well in Colorado. I had been working under a strain in my parish work, and I felt the need of a release. The great change from parish work to the life of a ranche was a great help. I am unable to say whether or not the climate, as such, was favorable to a depressed nervous condition. Certainly the bright sunshine, dry air, and exhilarating influences of the rare air all in-

duced to an out-of-door life, basking in the sun, riding on horse-back, etc. The *life* helped me."

Results such as these are clearly attributed to a factor of climate which may be termed configuration of ground and nature of soil and its products, which renders possible such a life as has been described.

It must be borne in mind, however, that it is the requirements of the individual that must be considered. Physical factors of climate must be given their proper place in making a choice, but individuality takes precedence. The temperament of the patient, his previous habits, tastes, and mode of life, and degree of physical activity are of prime importance. The mind must be studied, for no matter how nicely we may adjust the elevation, temperature, sun and wind to the requirements of heart or lung, nothing will avail if the patient's mind, his psychologic needs, are disregarded.

A CASE OF HEMIPLEGIA OF RIGHT SIDE AND HEMIOPIA OF LEFT, CAUSED BY PENETRATING WOUND OF BRAIN.

By CHARLES S. POTTS, M.D.

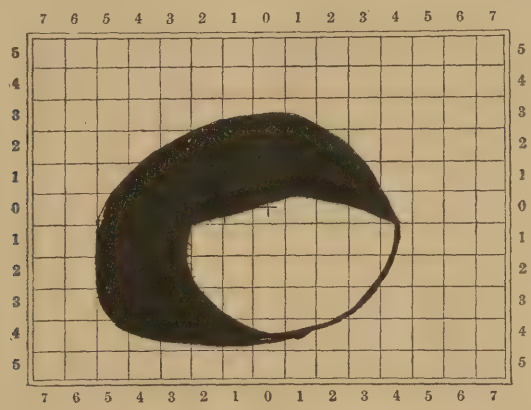
THE interest which attaches to the case which I will show you does not depend so much upon the symptoms exhibited as upon the unusual manner in which they were acquired. The history is as follows:

A. S., æt. thirty, and a native of England, was until July, 1889, in good health. At that time he was pitching hay on to a wagon which at the time was nearly loaded. While elevating a fork-full of hay, and with face upturned, the boy upon the load let drop his fork, one prong of which entered the left orbit to the outer side of the eye. He became immediately unconscious, and Dr. Reeves, of Medford, N. J., who saw him immediately after, gives me the following account of his condition at that time: He says the prong of the fork had penetrated the brain at least two inches, and as the man fell, the fork, still in the brain, made a sidelong swing of at least 90°; he was unconscious and paralysis of the right side was noted, the condition of unconsciousness lasted several days; upon regaining consciousness he was only able to converse in the Yorkshire dialect, which he had not used for about fifteen years previous; this condition lasted for three months, after which the power of expression in ordinary English returned, although he still has to use the Yorkshire dialect to a slight extent. There never was any loss of the power of understanding what was said to him in English, and he could read. The temperature did not rise at any time above 101° Fahr., and after ten days became normal. Since the accident he has regained considerable power and his condition at present is as follows: Hemiplegia of the right side, muscles slightly wasted, with some tendency to contractures, but can walk fairly well, some use of arm, slight paresis of right side of face, no sensory paralysis, knee-jerk increased upon the right side. The examination of his eyes by Dr. Wallace showed the following conditions: In the right eye vision is $^6/_7$, and the eye ground and field are normal. In the left eye, vision, $\frac{6}{180}$,

nerve completely atrophic, and has a filled-in appearance, color greenish-gray, sharply scleral dual ring; around the nerve is an uncompleted ring, very narrow and shining white in color. There is a scar near the outer canthus, with a point of black discoloration in the conjunctiva. The field of vision is contracted upon the temporal side, and the superior half is blind.

There is no difficulty with hearing. There is no history of syphilis, and 5 grs. of potas. iodid. three times daily cause iodism.

These symptoms I think were caused in this way: the prong of the fork entered the orbit and then divided the



lower and some of the inner fibres of the optic nerve posterior to the entrance of the central artery of the retina, then probably passed upwards, punctured the roof of the orbit and entering the brain injured the corpus striatum and probably some of the motor fibres of the internal capsule, or possibly caused a hæmorrhage there. The aphasic condition was probably due to the shock sustained by the brain. Another interesting point in this case is that no brain abscess resulted, also that no other structures were injured. For the opportunity of showing this case I am indebted to Dr. H. M. Fussel.

THE FREQUENCY OF LOCOMOTOR ATAXIA IN NEGROES.

By C. W. BURR, M.D.

WE are probably more advantageously situated in America for the study of the influence of race on disease than are the students of any other country, for we have among us large numbers of foreigners living more or less their own lives while all are under identical climatic conditions. On the other hand, in studying race influences in people still in their native lands, it is impossible to tell how many of the peculiarities of the manifestations of disease are due to race itself and how many to climate in its broadest sense.

With a view to throwing some light on the question of the frequency of locomotor ataxia among negroes, I have collected the following statistics, or as it would be better to say, opinions from physicians in Cuba, the Southern States and our own city. I am well aware that this method has many disadvantages, unless one can get the opinions of a vastly greater number of men than I have been able to do. I am also well aware of the carelessness of negroes toward chronic diseases, but still I feel that the data are sufficient to permit a tentative conclusion to be drawn.

Dr. Juan Santos Fernandez, of Havana, was so kind as to prepare and send out for me circulars to the physicians of Cuba. Six of the thirty-eight who replied have seen eight cases in full-blooded negroes, and one has seen several in mulattoes. These physicians are scattered throughout the whole extent of the island, many of them have had large experience on plantations ; the aggregate duration of the practice of twenty-six is three hundred and forty-one years. One who in twenty-seven years has had twenty plantations under his care has never seen a case, and another who for seven years has had under his charge fourteen has seen but one.

Dr. W. H. Huger, of Charleston, S. C., writes: "My own impression is that negroes are exempt. I have never seen a case." At a meeting of the City Medical Society, and also at the spring meeting of the State Society, no member had seen a case.

Dr. J. W. Byers, of Charlotte, N. C., writes that he has never seen a case, and from his study of the race and its peculiar diseases he is inclined to believe that it is an exceedingly rare disease.

Dr. Middleton Michel, of Charleston, S. C., writes: "Having previously given some attention to this very subject, I am able to declare it to be comparatively rare so far as statistics have helped me to decide the question. Of course we meet cases of unmistakable ataxia in the negro, but not nearly as frequently as among the whites."

Dr. Osler, of Johns Hopkins University, Baltimore, writes that out of twenty cases which have been under observation since the opening of the hospital, one was a full-blooded negro and one a mulatto.

Dr. W. C. Dahey, of the University of Virginia, writes that in twenty-three years he has never seen a well-marked case, while he has seen many in white people. He has, however, seen a few cases which presented some of the symptoms of the disease.

Dr. R. A. Kinlock, of Charleston, S. C., does not remember ever to have seen a case.

Dr. Thomas F. Wood, of Wilmington, N. C., sent notes of a case occurring in a man whose father was white and whose mother was a pure African.

Dr. G. T. Vaughan, of Indiana, writes that, "in a practice of ten years, during which I have always had more or fewer negro patients, I do not recall a single well-defined case."

Dr. Irving C. Rosse, of Washington, D. C., writes: "While I am not in possession of enough facts relatively thereto to warrant the formulation of any general conclusion, I can personally testify to the frequency of tabetic troubles in that race (the negro)." In his letter he mentions four cases which he has seen in the last few years.

During the last fourteen years no case has applied at the Infirmary for Nervous Diseases in Philadelphia. It must be said, however, that very few negroes come to that institution. Dr. Potts, of the Nervous Dispensary of the University of Pennsylvania, tells me that no case has applied there during the last eight years. Dr. D. S. Stewart, of the Nervous Dispensary of the Jefferson Medical College Hospital, has never seen a case during his service of more than six years. Other physicians to whom I have spoken, while their opinions varied on theoretic grounds, have been unable to recall cases. I have omitted to cite hospital reports because they are notoriously false, and because those which I received made no distinction between pure-blooded negroes and mulattoes. This distinction is of some importance, for I do not believe that we are justified in saying that the offspring of a pure negro and pure Caucasian receives an equal inheritance from each, equally shared by all organs. I can easily conceive of such an one with a Caucasian brain and African liver, or *vice versa*.

For my own part I have never seen a case in a pure black, and but one in a mulatto. His history is as follows :

J. S., male; mulatto; single; no occupation; came to Dr. J. P. Crozer Griffith's clinic at the Howard Hospital, April 14, 1890.

Family History.—Negative.

Personal History.—Chancre four years ago. Never inflammatory rheumatism. Two years ago chills on alternate days for one week. One year ago vision began to fail and he began to stagger in walking. Some rheumatic pains in legs.

Present State.—Gait very ataxic. Station with eyes open bad, and with eyes shut he cannot stand at all. Difficulty in touching ear and nose with eyes shut and in picking up small objects. Knee-jerk absent and not reinforcible. E. j. absent. Cremasteric reflex absent. Abdominal reflexes present. Muscle-jerks present only in the pectorals. Sensation to touch and pain slightly impaired, to temperature normal. Tells the position of legs well when eyes are shut. No painful nerve points. No wasting. No fibrillary twitching. No palsy. Sexual sense said to be good. Bowels constipated.

Dr. Castle kindly examined his eyes and reports: "Argyll Robertson pupil. Eyes protrude somewhat. Optic atrophy most marked in left eye, with which he can only tell light from darkness. Arcus senilis."

Heart.—Very inconstant murmur at apex. Some accentuation of pulmonary second sound.

Lungs.—Decided dulness in lower left axillary region with a few crackling râles on inspiration. No spinal deformity.

At no time has he had gastric or other crisis; the lancinating pains have never been severe. His condition has steadily grown worse. He was treated for some months without any improvement.

In conclusion, I think we may say that while the data given are not sufficient to permit one to say dogmatically that locomotor ataxia is a rare disease among negroes, still it is sufficient to permit one to hold such an opinion tentatively until further investigation disproves it.

DISCUSSION.

Dr. C. S. POTTS reported

A CASE OF HEMIPLEGIA, FOLLOWING PENETRATING WOUND OF THE BRAIN, WITH RECOVERY.—THE PATIENT EXHIBITED. (See page 72.)

The PRESIDENT.—This case presents a number of points of interest. In the first place, the occurrence of hemiplegia due to a wound of the brain, and secondly, not followed by abscess. This absence of suppuration calls to mind the experiments of Dr. Spitzka in which he injected substances septic in character such as earth, mud, etc., into the brains of dogs without abscess following.

In the third place, the case is of interest from the occurrence of temporary aphasia followed by a recovery, in which a dialect used only in childhood and early youth reappeared, and followed still later by the incomplete recovery of the proper English language.

Dr. CHARLES K. MILLS.—It would seem hardly necessary to hold that the loss of language was due to a general shock to the brain. It was more probably due to injury of third frontal convolution itself. The direction of the penetrating instrument was such as to destroy par-

tially this convolution, or, as Dr. Potts, suggests the internal capsule rather than the convolution itself. If the third convolution and its neighborhood were injured, we would have destruction of the power of propositionizing in the ordinary manner, and I suppose that in such a case, one would naturally go back to the language which was most elementary. Language, like every other function of the brain, is organized most deeply in the lower strata of the brain. As the part recovered from the effects of the injury and of pressure, the later acquired speech faculties would be regained. Evidently in this case the temporal lobe was not affected, and in all probability the island of Reil was not injured.

Dr. GUY HINSDALE read a paper on

INFLUENCES MODIFYING THE OCCURRENCE OF CERTAIN NERVOUS DISEASES IN THE UNITED STATES. (See page 66.)

Dr. J. P. CROZER GRIFFITH.—The only thing which I wish to add to the very interesting paper of Dr. Hinsdale's is the result of my own observations, together with the general popular and medical impression regarding the effect of high altitude upon general nervous conditions. It seems to be an impression among many in the west that one is not able to perform the same amount of mental work at high altitudes, such as that of Colorado Springs, as can be done in the east. If you will allow me to talk about myself, I want to say that I went to Colorado Springs last March to remain several months. My health was perfect, and I laid out for myself considerable literary medical work which I had had on hand for a long time. Medical friends in the place assured me that I would not accomplish much, —that nobody did. I was disposed to laugh at the idea, but they were right, and I was wrong. For some reason I found it difficult to concentrate my thoughts in any continuous mental effort. Were this my own experience only, I would not relate it, as it might perhaps be accounted for in other ways.

It is also well recognized in Colorado Springs that persons of a nervous disposition frequently do not do well at that altitude,—about 6,000 feet,—and that in some instances they are entirely unable to remain and enjoy any comfort in life.

One instance I call to mind especially, in which a family appears to have been actually disrupted by the influence of

the climate. The father and husband, a sufferer from phthisis, is obliged to remain in Colorado Springs, the wife is so affected nervously by the altitude, that she cannot remain, and the son, likewise, is compelled to live at a lower altitude on account of heart disease.

Referring again to my own sensations, I found that for the first part of my stay, I could for some reason sleep but poorly, though I never have any such trouble here. I do not think I am alone in this experience.

Again, it is reported among local physicians, that persons coming from the east are much disposed to neuralgias. I am never troubled by it, but soon after reaching Colorado Springs, I was attacked by severe supra-orbital neuralgia, which continued for three weeks. Like the other features mentioned, I would regard this as a coincidence were I alone in the experience.

I throw out these personal experiences for what they are worth,—very little, I know, by themselves. But I believe that the general opinion of the physicians of these regions is worth a great deal.

We should therefore hesitate before sending to a high altitude, persons with well-marked nervous erethism. Even in phthisical patients we should seriously consider whether the bad effect on the nervous system may not counterbalance the benefit which otherwise might accrue to the pulmonary condition.

Dr. J. MADISON TAYLOR.—An important practical point was referred to by Dr. Griffith which I wish to emphasize as of my own experience. I spent over six weeks once in the Rocky Mountain country at an altitude of between eight and ten thousand feet enjoying perfect health with four others. We all slept badly, and many who I met before after similar circumstances, got poor sleep when so high. The exercise was enormous, and the life delectable, and each day we felt abundantly refreshed, and often got good *siestas* during the day, but at night it was unusual to sleep long and soundly.

I have lived under much the same conditions with tremendous daily exertions, but at lower altitudes, as in the Canadian woods, when the sleep was abundant and prolonged. This tendency to nervous exaltation must be gravely considered when sending patients into rarified air, for long and suitable directions should be always given, first by the one sending, and always to some competent physician familiar with local conditions.

This matter seems to me imperative. Again, when in the mountain country the tendency for all is to lose weight,

at least at first, or at any rate, not to gain. Not so in the lower countries. If nutrition be distinctly below par it is rarely wise to go above one or two thousand feet till this matter improve. This loss of sleep and loss of weight must not be lost sight of.

Again, if fever be present, certainly above a point which local physicians understand, the upper and lighter airs seem, in my judgment, to kindle this more briskly. The continual protest of the many admirable physicians of Colorado is lifted up against the advent of unsuitable cases.

We exercise a grave responsibility in advising unsuitable cases to go here and there. It is, indeed, best to have some personal knowledge of health resorts, though much can be learned by reading, and such discussions as this.

I know I found the North African Coast, the Greek Islands, and the French and Italian Riviera very different in many important particulars from my thoughtful preconceptions.

While we have plenty of climates in the United States suited to special needs, we have no excuse to be ignorant of the salient characteristics and occasional variations. For instance, I've seen the whole of August in the Adirondacks so cold and wet that many who stayed there were hurt, and should have fled away, or better, should have been advised to go.

Dr. C. W. BURR read a paper on

LOCOMOTOR ATAXIA IN NEGROES. (See page 74.)

Dr. J. MADISON TAYLOR.—I can add my small modicum of testimony to that already adduced by Dr. Burr. There has been no case of locomotor ataxia in the negro at my clinic for nervous disease at the Howard Hospital. It would be interesting to investigate this point among the Indians.

The PRESIDENT.—I have seen no case of true tabes dorsalis in the negro, but I have seen a case of syphilis of the cord closely simulating ataxia. It came on comparatively soon after infection and entirely disappeared under specific treatment.

Dr. JAMES HENDRIE LLOYD.—While I have not seen true ataxia in the negro, I can recall two cases of multiple sclerosis in negroes. I do not understand why the negro should be exempt from ataxia while subject to other forms of degenerative disease of the cord.

CASES OF UNUSUAL FORMS OF SPASM REPORTED FROM THE CLINICS OF S. WEIR MITCHELL, M.D.

By CHARLES W. BURR, M.D.

CHOREAL FITS CAUSED BY VOLUNTARY MOTOR ACTS.

CASE I.—D. B. C., male, aged sixteen, student, American.

Family History.—Parents and only living brother are in good health. So far as can be learned, there have been no cases of mental or nervous disease in the family. The father, a school teacher, is a man of excellent habits.

Personal History.—Patient was perfectly well until eighteen months old, at which time he had scarlet fever, during convalescence from which he had one convulsion. His health remained good until present trouble began, five years ago. At that time, without apparent cause, without any shock or over-strain, he grew nervous, irritable, impatient, and easily angered. For some months the pulse remained at ninety beats to the minute, and temperature usually one degree above normal. Appetite voracious but not perverted. Soon his father noticed that on starting to walk and on changing gait from walking to running, his legs would momentarily stiffen at the knees. Sometimes on beginning to speak to his teacher, and on rising from a chair, "his arms would jerk and fly about involuntarily." These attacks increased in frequency, extent, and severity, until after about one year they assumed the character described below. Soon after the onset of the trouble, circumcision was performed for phimosis. There had been no genital irritation nor interference with urination. The operation did not influence the attacks. He has been treated several times, for from four to six weeks, with potassium bromide in unknown quantities, always with excellent result in diminishing the number of attacks, but with such attendant mental depression as to prohibit continuance of the treatment. Electrical treatment greatly di-

minished the number of attacks for a time, but finally failed.

Present State (December 21, 1891).—Weight 127 pounds. Height, 5 ft. $7\frac{3}{4}$ in. Muscular development good. Color good. Skin leaky, especially after excitement. Abdominal and thoracic organs normal. Urine normal. Mental condition excellent. No evidence of the hysterical constitution. No history nor evidence of masturbation.

Station with eyes open nearly motionless, with eyes shut slight sway, one and one-half inch forward and to the right. The walk is slightly altered, there being a rather sudden lift from the heels. Knee-jerk, elbow-jerk, cremasteric, and abdominal reflexes very much increased. In arms and legs the muscle-jerks are marked, without humping, at the points percussed. Front tap is present from the knees down. Ankle clonus slight, say seven oscillations, after which a minute or two must intervene before it can be again developed. Sensation to touch, pain, heat and cold normal. No tremor is present either at rest or when arms or legs are extended. No ataxia on movement. The handwriting is slightly tremulous. The spine is without deformity, and there are no areas painful on percussion.

Dr. de Schweinitz reports: Pupils normal. Both optic discs slightly œdematous and margins veiled. Refraction H. No lesions of choroid or retina. Fields normal.

The attacks vary greatly in extent. Often there is only a momentary shrugging of the shoulders, slight to and fro movements of the arms, and a sigh, reminding one of habit chorea. These occur often when sitting quietly, and may be due to mere restlessness. At other times wild, jerky, choreic movements start in the arms or legs (in the attacks seen by me—Dr. Mitchell—always in the left arm), and soon become general. The patient seizes one arm with the other hand, bends forward, sways from side to side, grimaces, and sinks slowly to the ground. If he be holding something in the hand at the time of onset, he is able to shift it to the other hand and put it on the table. He is never thrown to the floor. Consciousness is unaffected. Duration about one minute. There is some flushing of the face. The tongue is never bitten. For a few seconds before the onset he has a "curious sensation," as he calls it, which he cannot more closely describe. The following attacks were seen by me (Dr. Mitchell). The left hand in wild athetoid motion, but opening and closing. Instantly the right hand fol

lowed and there were general movements in which he bent over into extreme flexion. In another attack he grasped the rung of his chair, being seated, and bent forward. Again, in another attack, while walking, there were the general movements with violent bending forward, until he crouched on the ground, and at the end was kneeling on one knee. There is no globus nor clavus. The attacks vary in frequency from forty in a day to none in three weeks. Rising from a chair, or starting to walk, is most apt to precipitate an attack. But this is an inconstant cause. The longer he has been seated the more apt is he to have an attack, and it begins usually at the moment the first effort is made to rise. Emotion of any kind seems to be without influence, and attacks are as apt to occur when he is alone or not watched as at other times. So far as known, no convulsive disturbance has ever occurred during sleep. His father states that the attacks are least frequent in the spring and summer, and most frequent in the autumn and winter. We have several times tried to induce an attack by muscle-strain in the manner described by Drs. Dercum and Parker, but without success. Attempts to hypnotize the patient have always failed. While receiving strychnia in ascending doses up to one-twentieth of a grain, t. i. d., at the Infirmary, the attacks markedly increased. Under thirty grains of bromide, t. i. d., the number fell remarkably, but he got into a state of irritable depression.

Remarks by Dr. Mitchell.—The manner of motion in these spasms is distinctively choreic. If the convulsions were continuous, the case would be labeled chorea major by any neurologist. It is worthy of note that it is the beginning of a willed action which gives rise to the worst fits, or else these occur during changes in a volitional action, as when he quickens his steps while walking. No attacks occur when recumbent or at rest, nor can they be then evolved by any act or excitation. Again, there is absolute clearness of head despite the enormous number of fits. The intellect, indeed, is of unusual excellence, memory very good; in a word, no least sign of the mental changes which incessant epilepsies occasion. Neither is there in the sensory sphere any sign of hysteria, and the courage with which he smilingly bears his disorder

is most remarkable. There is no mental nervousness, no emotional fullness, while the color-fields remain normal. There is here no evidence of cerebral lesion. Chorea as violent as this, if of cerebral birth, would probably occasion some of the mental disorders apt to be seen in bad chorea of youth. There are, however, the plainest manifestations of spinal disease—double clonus, front tap, excited reflexes, and imperfect gait.

It appears to me that we may have in this lad a case of true spinal spasm. In other terms, he has spasms which may be spontaneous discharges from spinal ganglia. So that a slight motion of a leg, usually the left, may be all of the fit. But when a volitional order to rise from a seat is passing through the cord, it gives rise to disorderly movements on a large scale. These resemble chorea in their quality. Each onset is a fractional chorea and has no apparent resemblance to either an hysterical or an epileptic seizure. I have seen many epilepsies in which consciousness seemed to be preserved, but in a large majority of these there was found to be either a moment of lost consciousness or a mild blurring of consciousness. The undoubted cases were sometimes hysterical, but with all proper exclusions made, there remained a few cases in which, with typical and even violent epilepsy, there was full consciousness; but the present case lacks all the usual qualities of epilepsy and has an interesting likeness to the singular choreas which we described (in a paper read before the American Neurological Association in 1890) as probably of spinal parentage, like those of the dog. Certainly they are not epileptic; and either we must class them as cerebral-choreal fits, or as spinal-choreal fits.

Case II.—M. P., aged forty-eight, tailor, German-Hebrew, married, applied at the Nervous Infirmary, Dec. 21, 1877. At that time there was constant and rapid pronation and supination of the left hand, flexion and extension of the forearm, and slight rotation of the entire member around the shoulder. On attempting to hold an object in the affected hand, it would be thrown over

his head. While sitting, the legs were quiet; but voluntary movements of the left caused spasm in it and increased that in the arm. Violent voluntary movements of the right arm or leg produced the same effect. He could not stand with eyes shut. He alleged that sitting on the hand was the only way in which he could prevent the movements in it. He attended the dispensary for a time, and then was lost sight of until May, 1891, when he returned, complaining of difficulty in walking and of violent involuntary movements of left arm.

Family History.—Father died of "cancer of the liver;" mother of old age. Eight brothers and sisters living and healthy. Seven died in infancy. There have been no cases of mental or nervous disease in the family.

Personal History.—Previous health good. Venereal disease denied and no evidence of it obtainable. Habits alleged to be good. He dates his present trouble from an attack of "bilious fever," which he had in January, 1877. A few months later he had pneumonia, and one morning, shortly after recovery, he awoke, after sleeping in a draught, with pain in the left arm and leg. He noticed, also, that the left leg dragged a little, and that involuntary movements appeared in the arm. He recovered, to a great extent, but being shocked by seeing his daughter faint in church, he rapidly grew worse again, and his legs became so weak, as he says, that he was confined to a wheel chair. He could move his legs in bed perfectly, but could not stand. He remained in this condition seven years. A friend then told him of a man similarly affected, who could walk backward. He tried this method of progression, and, finding it successful, adopted it. Some friends sent him to Germany, where, under treatment which seems to have been entirely mental, he improved greatly. Sometime later he underwent another shock, and rapidly lost ground again, but never entirely lost power of walking. We have been told by a physician who saw him when his son was desperately ill, that he threw aside his canes, ran about the room and gave as much assistance as an able-bodied man, until in about a half hour the boy died, when he sank into a chair, saying "Now I cannot walk any more."

Present State.—A rather spare, short, fairly-healthy-looking man. Abdominal and thoracic viscera normal. His breath has a curious, sour, disgusting odor, unlike that caused by decayed teeth or indigestion. His teeth, however, are foul and several of them decayed. Sexual

functions normal. Intelligence good. He is emotional, prone to exaggerate symptoms, and likes to be put on exhibition.

There is slight sway with eyes open, becoming marked if they be covered. There is some uncertainty of movement on bringing the index fingers together, and in touching nose or ear with the left hand. On the other hand, he has no difficulty in picking up small objects or in buttoning his clothes. Sensation in all forms is normal. Knee-jerk varies from day to day, sometimes being quite marked, sometimes very slight, but never absent. It is always re-enforcible. Elbow-jerk also varies. There is an attempt at, but no true ankle clonus. Muscle-jerk is quite marked in the arms. The spine is straight, and on pressure there is pain at the level of the second dorsal vertebra. There is at times a coarse tremor of the hands.

He walks with two canes, which he holds straight in front of him, and on which he leans lightly. Except for the shortness of the steps, his gait is quite normal. If the canes be taken from him, he stands swaying slightly, and protests that he cannot move. If one hand be supported, he apparently makes violent efforts to step forward, and finally falls, sometimes quite heavily, but never injures himself. There is no true palsy. While recumbent, he can move his legs forcibly in all directions. At times there is a violent clonic spasm of the left arm, which often becomes general and may throw him violently to the ground. The movements are epileptiform in character. The attacks last about a minute. Consciousness is not affected. They occur always after muscular strain, as, for example, lifting a rather heavy book, or holding the arms rigidly extended, or even trying to quickly touch the nose or ear with the finger, or forcibly shutting the eyes. While formerly the spasm always began in the left arm, it now sometimes commences in the right. While in hospital, spasms could be developed by massage and by hypodermic injections of water. On the other hand, he can feed himself and carry his canes perfectly well. An attack never occurs spontaneously, nor, so far as known, during sleep. On attempting to write, the pencil is grasped tightly, pressed with violence against the paper, a letter or two fairly well written, followed by a few scratches, after which the pencil is thrown away with an air of disgust, and possibly the tremor, which comes on as soon as he takes

it in his hand, develops into a general convulsion. All symptoms become much worse while he is under observation. Attempts at hypnotization failed.

Eye Examination by G. E. de Schweinitz.—External appearance of the eye is normal. The color of the irides is brown, and there is no asymmetry in tint or shade. The pupils are round, equal in size, and the reaction of the irides normal. There are no noteworthy anomalies of the external eye muscles. The cornaes are not anæsthetic. The central vision is deficient, owing to the presence of myopia.

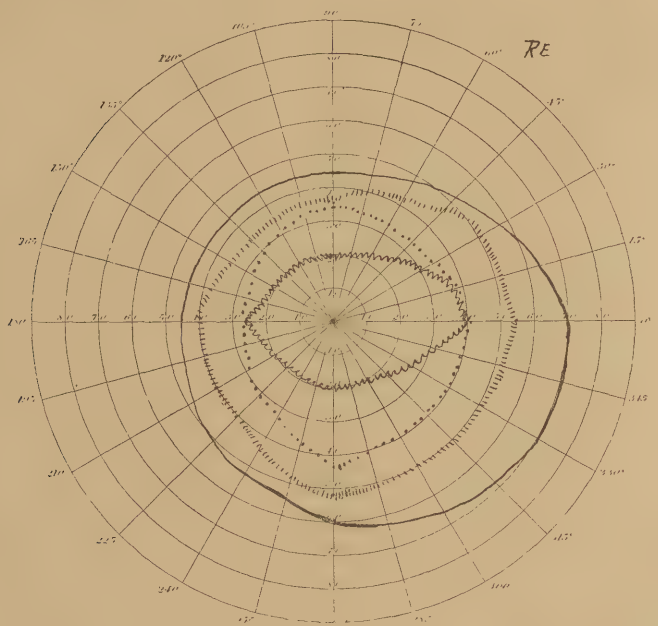


FIG. 1.—R. E.: The continuous line indicates the limit of the form-field; the line of short, vertical strokes, the limit of the blue field; the dotted line, the limit of the red field; and the zigzag line, that of the green field.

Opthalmoscope.—R. E.: Nerve-head nearly round, scleral ring broadened; some deficiency in the capillarity of the deeper layers. The veins are fuller than normal; the arteries, by contrast, slightly contracted. There is general absorption of the pigment-epithelium, exposing the larger vessels of the choroid. L. E.: The nerve-head is oval; the scleral ring, marked all around and at the tem-

poral side, broadens, with a crescent of choroidal disturbance. The color of the disc is somewhat gray; there is rarefaction of the choroid.

Fields of Vision.—R. F.: There is concentric contraction of the form and color-fields. The colors are appreciated in their normal sequence, except directly above where the red and blue field have the same extent, and directly inward and outward, where the red and the green field are equal in extent. L. E.: There is remarkable contraction of the form and color-fields, and partial

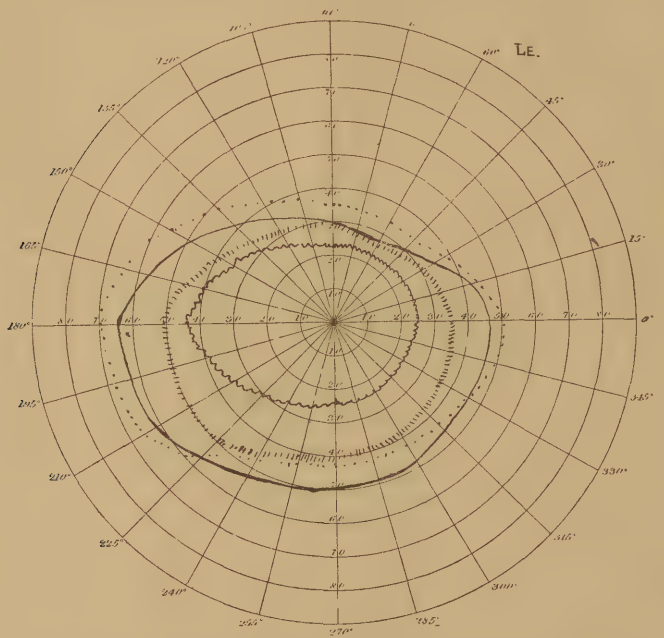


FIG. 2.—L. E.: The lines are as before, indicating respectively the limits of the form and color fields. It will be noticed that in contrast to that of the other diagram, the red for the most part occupies the greatest extent, exceeding in dimensions the form-field.

reversal of the normal sequence. The red field exceeds the limits of even the form-field in all meridians except directly below, where the form-field is the largest. The blue field equals the limit of the form-field above, and is smaller than the red field in all meridians, except below, where it equals it in limit. The green field is in its normal position in the color sequence, but is concentrically contracted.

Remarks.—The appearances of the eye-grounds do not differ from those natural to a low degree of myopia, and the slight grayness of the nerve-heads is not more pronounced than is normal for the patient's age and general coloring. The behavior of the color-fields is similar to other observations which have been made in hysteria. There is no achromitopsia, such as Galezouski has reported in hysteria, but there is concentric contraction and partial reversal (on the left side) of the normal sequence in which the primary colors are an appreciated, corresponding to observations which have been made in France by Landolt in Charcot's wards, and in this country by John K. Mitchell and de Schweinitz in the wards of the Infirmary for Nervous Diseases, and in the practice of Weir Mitchell.

This interesting case is certainly one of male hysteria. The examination of the eyes, the emotionality, the expressive hysterical face, the form and quality of the fits, all leave no doubt. When we consider the nearer-producing agencies of his spasms, we observe that some are sensory, some due to mental and moral disturbances, and the larger number to motor acts. If I cover his eyes no result follows, but if while erect he shuts them firmly, a violent spasm comes on. In one sense the fits could be classed as choreal. He cannot walk without canes, and when they are withdrawn he falls, therefore his case might be classed under the absurd name of astasia-abasia by persons fond of such ingenuities.

Case III.—A. S., aged twenty, single, female, no occupation, applied at the Nervous Infirmary, November 27, 1891, complaining of weakness of right leg and left arm, with involuntary movements in the latter.

Family History.—Father killed by accident. Mother died in confinement. Of eight brothers and sisters three are living and healthy; one was still-born, and the others died in childhood. No cases of mental or nervous disease in the family.

Personal History.—Patient was born at term; labor easy, and instruments not used. Healthy until sixth year, at which time it was noticed that she walked on the toes of one foot (which is not known). At about the same time

the left arm began slowly to grow weak. Spinal lateral curvature was noticed at nine years. With the beginning of menstruation, at fourteen, involuntary movements of the left arm appeared on attempting to execute certain movements. This continued and, indeed, grew steadily worse until about four years ago, since which time the member has been to a great extent useless. She has never had a general convulsion, nor an attack of unconsciousness, nor globus hystericus, nor clavus. Her general health has always been good, except for occasional attacks of temporal headache.

Present State.—Small, thin, pale. Hair black; eyes brown. Abdominal and thoracic organs normal. Urine normal. Appetite fair, bowels regular. Menstruation normal.

There is constant coarse tremor of the entire body, except head and tongue, most marked in left arm and right leg. The little finger of the left hand is in constant clonic spasm, the interossei being alternately contracted and relaxed. There is also alternate contraction and relaxation of the hypothenar muscles.

Movements of the right arm are performed without difficulty. On attempting, however, to put the left hand to the head, on holding it rigidly extended, and on carrying an object to the mouth, quite violent choreic movements occur in it, and after a moment it falls to the side. All other movements are performed without difficulty. On extending the right leg and holding it unsupported similar movements occur in it, and may appear also in the arm. Holding the left leg or right arm extended increases the general tremor, but produces no choreic movements. The tremor may be controlled for a moment by effort of will. Emotion increases the violence of both forms of motor disturbance, but never causes an attack. Passive movement will not produce an attack. Sleep is perfectly quiet.

Dyn. R. = 42; L. = 35 (she is right-handed). There is no true palsy, but muscular effort soon causes tire. There is no ataxia; station good. Gait is tottering. The right leg is jerked forward apparently involuntarily, and the toes scrape the floor; but the foot does not drag.

Knee-jerk is much increased on both sides and is reenforcible. Elbow-jerk marked. Muscle-jerk in arms and legs marked. No clonus, no contractures, no wasting, no fibrillary twitching. Sensation in all forms normal. Slight anterior curvature of upper dorsal and

cervical spine. Speech normal. Mental condition good. Emotions rather highly developed. Dr. de Schweinitz reports: Pupils normal, slight retinal haze. Fields normal.

There appears to have been here a sclerotic alteration, perhaps caused by cerebral lesions very early in life. It is difficult to say whether the small, choreal spasms, which in her case follow certain willed efforts, be cerebral or spinal. There is no mental disorder and there is evidence of spinal disease.

CASE IV.—A. C., aged twenty-three, New Jersey, seamstress. Her family, Quaker people, are unusually healthy. She herself was well until her third menstrual flow, which took place late, when over fifteen. Some religious excitement may be credited with the disorder of nervous system which followed. After several hysterical fits of no very grave nature, she was, one day, seized with a spasm on rising from a low chair. Her mother, who saw her, described her as bending over when half risen and as moving hands and feet in a wild and strange way. The attack was to her alarming and was followed by hysterical tears. From this time onward she never rose from the seated posture without a spasm. She could, however, get up from a supine attitude without a fit. When first seen by me, two years later, she was a tall, well-made girl, rosy and plump. Every function was well performed.

Her knee-jerks were excessive, and there was slight clonus in the right foot only. Nevertheless there was no spasticity of gait, and no excessive muscular reaction. Many of her attacks were seen, as she was a long while in the Infirmary. They varied little. As she rose and while the legs were still at a large angle, the attack began. The muscles, beginning to contract, did not prevent the girl from rising to the erect position; but at once the fit became general, and distinctly progressed from below upward, so that the thighs, trunk, belly, and chest muscles were involved in turn, and at last the upper extremities. The fit lasted five to twenty-five seconds, and usually after wild choreic movements, ended in what seemed to be a general contraction of the flexors, and then sudden relief. During the attacks, which, as they always followed effort to rise, I saw often,

she gave evidence of the perfect preservation of consciousness.

No other motion or action was competent to evolve these fits. If while in bed she very abruptly rose, she escaped. If she sat five seconds there was a fit as she rose.

I was unable to help this case and lost sight of it. I have no doubt that it was of spinal origin.

A similar case, but of extreme violence, was reported by me in a paper on "Functional Spasms."[1] These were grouped under three heads: 1. Where a voluntary motion was liable to abnormal exaggeration. 2. Where a normal functional act (muscular) results in limited spasmodic action of remote muscles, not engaged in the original movement. 3. Where standing or walking gave rise to a general disorder of movement. Bamberger describes one of these latter cases, where the contact of the feet with the ground seemed to be the cause of spasm. I have reported a similar case, but I was never sure in my case that the commencing muscular acts due to standing might not have been the true parents of the spasm. Pressure on the soles did not cause spasm while the lad was on his back. Gowers has, too, a case of spasm from the act of rising (p. 990, Am. Ed.).

DISCUSSION.

Dr. FRANCIS X. DERCUM.—I had the fortune to see this man many years ago. He at that time had excessive rigidity of the left leg and also of the left arm. The position resembled what we see in hysterical contracture or in secondary contracture in hemiplegia. He had at that time, to some extent, the phenomena described by Dr. Mitchell to-day. I remember that excessive clonus could be excited in the arm and that there was exaggerated knee-jerk. I attempted to make him walk and he managed to scrape along the floor backward.

Dr. CHARLES K. MILLS.—It seems that the interest in this case attaches more to its nature. I should hardly be inclined to regard a case of this kind spinal, unless I misunderstood the use of the word spinal. To my mind, in a negative rather than in a positive sense such cases

may be so regarded. In all these cases of spasm and tremor brought on by voluntary effort—or, as in one of two cases which I reported in the International Clinics—by thinking of an effort—it seems to me that the cerebral element, positively or negatively, is most important. These cases are spinal in the sense that the movements are not controlled by cerebral action. They are not purposive movements, or at least not purposive in all cases at all times. In the case of athetoid spasm and myotonia which I reported to the American Neurological Society, I had an opportunity of making an autopsy, and found widespread meningitis of the parietal convexity and softening beneath it. Of course, that was not a case of the character shown to-night, but it was an instance of organic disease in which the spasms were brought on by voluntary effort or by thinking of effort. It is probable that, in most of these cases, a want of cerebral inhibitory power has much to do with the occurrence of these movements.

Dr. FRANCIS X. DERCUM.—It seems to me that the symptoms in the case shown are in one sense spinal. They certainly resemble those seen in lateral sclerosis, although it is probable that the withdrawal of the function of the centres controlling the movements of the legs has much to do with the occurrence of the intense spasm.

It further seems to me that by using his canes in the peculiar manner that he does, the man may gain that sense of security which a child feels when crawling on all-fours. When he feels the floor, the centres supplying the legs are re-enforced, as it were. The case is doubtless a mixture of cerebral and spinal phenomena.

INSANITY OF THE PUERPERIUM.

By AMELIA GILMORE, M.D.,

Permanent Resident to the Insane Department of the Philadelphia Hospital.

IT is only in State or City Hospitals for the Insane that puerperal insanity is seen in numbers large enough to form deductions of its general characteristics, for grouping of symptoms and preparation of statistics which will be of benefit in the study of this class of cases. The reasons why this is so are obvious.

The patrons of private asylums will provide home treatment in the case of mania in child-bed, the prognosis being favorable. I have seen no statistics of the relative frequency of puerperal insanity between the rich and the poor, but it is probable that though the physical causes would be nearly equal in the two conditions, the moral causes which would conduce to its production may be increased with poverty, and among the poor when the reason is dethroned the resources of the household are insufficient to provide the necessary care for the unfortunate one, and the public institution is open to her. Of the isolated cases we rarely receive published records, so that no data from this source is obtainable.

As regards the frequency of puerperal insanity as seen in asylums, we find in an English county asylum, corresponding to our State Hospital, out of 2,000 cases admitted there were 59 puerperal cases, or 1 in 34. In Norristown State Hospital, out of 2,500 admissions, 150 were puerperal, or 1 in 17.

Taking the Royal Edinburgh and the Pennsylvania Hospital for the Insane as examples of the best private asylums, we find that out of 332 admissions in the former in 1890, there were but two of puerperal insanity, or 1 in 166; and in the latter in something more than a total of

4,500 admissions, there were but 15 of puerperal insanity, or 1 in 300.

In the Philadelphia Hospital, out of 1,470 admissions there have been 34 of puerperal insanity, or 1 in 43.

I think it is not often enough remembered that this physiological crisis furnishes more patients to the State and City Hospitals for the Insane than any other period or cause, excepting in hospital statistics the etiological nondescript—"general debility."

Of the 34 cases which I report, in 25 it was the first attack; in 6 cases it was the second; while 2 of them have had three attacks, and 1 has been four times insane at the puerperium.

The Results.—Recovered, 20; improved, 2 (taken out by friends); died, 2.

There are 10 remaining: 3 in chronic mania; 1 in stationary mental condition has developed phthisis; the others convalescing or improved.

Of the recoveries the duration of the illness varied from two months to four years; and for the length of time in the hospital from one month and seven days for the shortest case to twenty-eight months as the maximum time under treatment. And the tables of recovery show that there is a relation between the early hospital treatment and early recovery, the advantage being to those who are admitted at the onset.

The average time in the hospital has been about six months, though one-third of the cases were less than four months under treatment.

Age seems to have some influence also in the prognosis. Two-thirds of those who recovered are below thirty years of age, while of those who have not recovered, the most are thirty years old or above it; 7 above thirty to 3 below it is the proportion in this class.

Only one-fourth of the cases were primiparæ. Illegitimacy was a factor in but 3 cases, though in some foreign asylums this is one of the chief causes of puerperal insanity—the rate being as high as 25 per cent. in Dr. Clouston's

cases. One had been deserted very soon after her marriage.

Of the forms of insanity at this period, mania was the more frequent, appearing in two-thirds of the whole, while one-third were melancholic, and this is the proportion noted by most observers. Positive delusions were not common among them; a few only believed themselves subjects of persecution. One melancholic believed that she was about to be put in boiling oil, and was always peering about to see the approach of her executioner.

One asserted that she was immortal and would never die. Another believed that it was her duty to pray constantly to guard those whom she loved from the machinations of the devil. One is superior to her surroundings—feeling no ill. Another is weeping over her sins. In general the morbid fancies were of a painful nature. In one case they were hypochondriacal. Mistaken identity was observed in some instances, the patient calling herself by some other name, or thinking that new faces were those of old friends. In two cases they believed the food poisoned.

One denied marriage, and declared that she had no babe. Another threw away her wedding ring. A third believed that her child was "changed" on the third day, another being substituted for it.

Visual and aural hallucinations appear in a large proportion of the cases. Where there is but one such anomaly it is found in the sense of hearing. In one case observed, all the special senses were affected. She saw animals and reptiles, or objects of a repulsive nature, crawling about her. Another saw babes creeping. In neither of these cases was there an alcoholic habit.

Eroticism, which we find spoken of uniformly as a common feature in puerperal insanity, I have found present in but one case, and the patient did not exhibit this phase while in the hospital; but on being taken home before her recovery was established, she gave her family trouble. She thought that every man she met was

enamored with her. After she returned to the hospital she would denude herself in the ward.[1]

Of special features which are noted in other forms of insanity as well, I have made these observations:

Anorexia and refusal of food is not uncommon among puerperal cases. It is usually overcome by mild insistence and persuasion. I found it persistent in but four patients, and in these nasal feeding was resorted to for a short period in each case.

Pyromania was developed in two cases. In one it occurred in the hospital; in the other, before entrance. When the latter attempted to set fire to the house, she said that she knew that her little children might be burned in the flames, but thought it would be better for them.

Suicide.—Bevan Lewis characterizes the impulsive tendencies of puerperal patients as an "explosiveness," which makes them dangerous to themselves and those about them. My records also show suicidal and homicidal tendencies in a small proportion—9 per cent.

One jumped from the window with supposed suicidal intention, causing fracture of the right femur. Another threw herself from the second story window in a desire "to save sinners," she said. Another attempted to get out of the window to escape pursuers. In both the latter cases the delusion was foremost and so prominent as to make them unconscious of danger to themselves. Neither of these accidents took place in the hospital, but occurred before the patients were brought there. So that it seems possible to prevent them if treatment is begun early.

It is contrary to our custom ever to leave the child alone with the mother, so that we have no instance of

[1] Hammond has found obscenity common even among the virtuously reared, and quotes earlier writers as saying it is so common among them as to be characteristic; also that the mental upheaval is even deeper than in ordinary mania, and it is more apt to be complicated with irresistible impulses and erotic ideas. My experience does not coincide with this, and I think the conclusion may be drawn that the tendency to eroticism is not provoked when the patients are under the medical care of women.

injury or abuse to the infant in consequence of insane fury, such as is sometimes recorded. The rule with us is to give the breast to the child so long as it can be done with advantage to both concerned. If either suffers from it we remove the cause. As a rule, the infants born in the hospital, or brought with the insane mother, are puny. A majority die during the first four weeks, others are taken from the breast, for one cause or another, usually before the end of the second month.

Tests of the number and value of the red blood-cells were made in a few of the cases, and these examinations confirmed the observations of others that the amount of hæmaglobin is notably diminished in most; and that this is true even though the number of red blood-corpuscles is normal, the corpuscular value is not up to the average.

The amount of hæmaglobin varied from .55–.75; and the hæmacytometer in these two cases respectively gave 3,150,000 and 3,990,000 as the number of red blood-cells per c. m. m. In the first case the anæmia was a prominent feature, and it was characterized by religious exaltation, so that she chanted hymns and prayers during her labor. Another case, with the blood count at 4,360,000 per c. m. m., the hæmaglobinometer estimated the value at .70 of the standard of healthy blood.

Albuminuria does not appear as a noteworthy factor. I have observed it in but one of these cases. Coming on two weeks before delivery, it did not persist, but yielded to treatment, and has not since returned.

Subinvolution of the uterus with eversion of the cervical lip complicates one case in which the mania persists beyond the usual period.

As for the prognosis: This subject is of the first consideration generally in these cases, and one which it is desirable early to determine in order to relieve the anxiety of friends. The importance of inheritance is not underrated, and yet where this is unfavorable and there is strong neurotic tendency, or insanity is known to exist

in the family, we have still ground for hope, as our recovery-rate in these instances is quite .50.

In general we make a favorable prognosis, as the number of recoveries is large, reaching as high as 80 per cent. in some asylums. In the Philadelphia Hospital there was recovery in two-thirds of the cases, or .66, with some still remaining under treatment, whom it is safe to say will recover, making the rate still higher, as but three cases remain with us in chronic mania.

I have also made some observations as to the spasmodic or quasi-epidemic character of puerperal insanity, as it has appeared in the history of the Philadelphia Hospital in groups of three, five or six, from time to time, and then there may be a long interval in which not a single case occurs. Whether coincident with any public calamity, general business depression, or spread of contagious disease, or whether it is a species of folia communiquèe I have not been able to determine. In 1891 the epidemic did not follow that of the influenza, but preceded it, so that this cannot be added to the charges already made against that hydra-headed monster —la grippe.

The insanity differs little if any from the ordinary mental alienation in the acute stage, when the nutritive value of the blood is impaired; and the nervous elements, being more highly organized than any other and soonest affected by it, are unequal to the demands made upon them.

Sankey, while disclaiming any warrant from a pathological view for speaking of insanity of the puerperium as a special form of disease, yet declares that in the wards at Hanwell he could always point out the cases of melancholia, mania, paresis, imbecility, recurrent insanity, cases of stupor with chronic symptoms, delusions, etc., which commenced during the puerperal condition. Dismissing the fact with the mere statement, he leaves us in doubt as to the special differences he could detect between these and the same forms of insanity occurring under other conditions.

All writers on insanity recognize that there is a peculiar liability to mental disease in the parturient woman, and though it may be in some cases of very limited duration—functional only—producing no lesion, in others it persists for a longer period with alteration of structure.

Early opinion regarded it as an expression of a general toxæmia which too often occurred after parturition —a necessary concomitant of puerperal fever—though there were cases in which there was no sepsis, and these were ascribed to inherited tendency, depressing emotions and anæmia.

The etiological nomenclature is open to objection, yet the name of puerperal insanity presents to every physician a distinct clinical picture which needs no explanation.

It has been classed as a constitutional insanity and made to include the three periods of pregnancy—the puerperium and lactation. More recently its limits have been narrowed, and the prevailing idea is to confine it arbitrarily to the few weeks preceding and succeeding parturition—the period comprised in the onset of labor, beginning with the descent of the uterus and the first half of uterine involution.

It is a subject which concerns the obstetrician as well as the alienist; indeed, the one should possess an equal interest with the other, because it is the obstetrician who notes the prodromes, who observes the first ominous symtoms of unstable mentality, for it is seldom that it appears suddenly, but it sends out warnings, electric flashes, which indicate that the mental apparatus is somewhere at fault—the central dynamo sends an irregular current, or the conducting wires are imperfect—somewhere or some how at the starting-point, or along the line, there is trouble.

It is the obstetrician, then, who should observe the evidence of nerve exhaustion exhibited by restlessness, disturbed sleep, often the flushed face and eye of unusual brightness. Depression in some degree is so common at this period as to pass unnoticed at the time as a special feature of the disease. Perhaps the patient is garrulous,

laughs or cries without reason, finds fault needlessly, disobeys directions, begins to be suspicious of her nurse or others. These are but examples of the early symptoms, which are as various as the minds which conceive them, so that we have a person who has been under physical and mental strain of a peculiar kind for a period of nine months—a person in whom the usual processes of waste and repair have been relegated to new uses. New tissues have been constructed, new secretions provided. The long months have been of great activity in the economy, and much of energy has been consumed. Extra labor has been demanded of every organ and tissue. The brain, lungs, heart, stomach, liver, kidneys, spleen—supplied with blood altered in quality and quantity—they have had to accommodate themselves to new conditions, while the nervous, vascular and respiratory systems have been each urged to their full capacity. To all this is superadded the shock of severe pain, and finally the loss of blood, which may be excessive.

If this is insufficient—and the picture is not overdrawn—we have in many cases domestic trials, moral causes, which appear with unusual intensity at this time, with a force sufficient to shatter the nervous system already strained to its utmost tension, or having the taint of inherited mental instability.

So that we find that the insanity may be developed at the time of labor, or just previous to it, the period of the culmination of all the physical changes which have progressed steadily to this end; or it appears soon after the delivery, when anæmia is present and the question of toxicity as a factor in the insanity may also be considered; or the mania is not developed until after a period of eight to ten days, when the system has begun to recover from the shock, lactation is established, and in a normal case the thoracic and abdominal viscera have resumed their usual functional activity, and it would seem to be now psychical rather than somatic, or that the balance which has been hardly held up to this time, is now lost from slight cause. Yet, passing this, we have still a danger,

and insanity during the period of lactation is not uncommon. I recall one case admitted to the hospital three times at this epoch. Each time she passed the puerperium without mental derangement, the insanity not appearing till some weeks later. Each time she was maniacal, exhibiting marked exaltation of a religious character. She was the "King of Heaven," the "Pope of Rome." She talked of having "lived a million years." Each time there was recovery after treatment of eight to ten weeks.

But whether it is from anæmia, toxæmia, inherited instability, physical or moral causes, one only or all combined, as we find in some cases, the result is the same. When the nervous tension is overwrought, as it may be in parturition, exhaustion ensues, and there results sooner or later, in the wavering nervous centres, incoherence, immoderation, the brain reels, the mental structure topples.

The causes of insanity in general, as usually enumerated, are these: Shock, injury, excessive fatigue, and exhaustion of brain and entire nervous system.

Any one of these is considered sufficient to produce insanity in an otherwise healthy individual, but in a puerperal state they are all brought to bear at the same time on one organism, and when there is added the fruitful soil of inherited tendency, the wonder is not that there are so many insanities developed at this period, but that there are so few.

Also it is well to remember that the pelvic organs bear an intimate relation to the dominant force—the brain; that there is a finely adjusted balance of action and reaction between the organs of reproduction and the higher centres, and the equipoise being delicate, a disturbance in the one results in some cases in hysteria, in others true insanity, mania or melancholia, according to the conditions attending.

Pain is always a shock to the nervous centres. If they are in health they will react as do other tissues when temporarily injured; but if there is insufficient vitality

or instability inherited or acquired, then the disturbance which is set up is of longer duration. In an uncomplicated case there are no definite brain lesions, but signs of exhaustion only, and the nutrition of the nerve centres would seem to be at fault. Of course, unless this is speedily remedied the functional incapacity is not recovered from, and we have permanent impairment.

Incoherence is an early symptom, and it is often excessive and persists in some degree to a late stage. Whether there be exaltation or depression, the incoherence is present, and I think it is indicative in these cases, of the acute and transitory character of the affection, as if the passage of sensory impressions to the usual centre was suddenly prevented, some obstruction having occurred, or the track to the propositionizing centre is blocked, or passing this point the speech centre or the motor centre receives the stimulus imperfectly, it having been diffused *en route*, and the result is incoherence of speech or irregular acts.

In the majority of cases there is increased mental activity, which may be either painful or pleasureable; but, as we have seen, the emotions are usually depressive and accompanied by excessive action.

I notice that it is now being considered in some quarters whether the puerperium is not a prime factor in the production of multiple neuritis and degeneration of nerve tissue, cases having been observed where these conditions followed parturition.[2]

If this is found to be true, we may with some degree of confidence assert that falling short of an actual degeneration of nerve tissue, we may have such a molecular disturbance in the sensitive cells of the nervous ganglion as to produce incoherence, faulty conceptions, exaltation or depression of mind, which may be of longer or shorter duration according to the conditions.

It is manifest that if the obstetrician was on the alert for possible mental alienation in every case, the admis-

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[2] *Vide* British Med. Jour., Nov., 1891.

sions to the State and City Hospitals for the Insane would be greatly diminished and the labors of the alienist lightened. Only a word need be added as to prevention. Great stress should be laid in directions to the nurse, or any departure from the usual mode of thought or action of the woman, especially symptoms of depression noted, and the hygiene of the puerperium should be so perfect, the mental danger so thoroughly understood, that at the least suggestion of an unbalanced mind the regulations of a well-ordered insane hospital should be carried out.

Removal of all sources of irritation, the secreting and excreting functions carefully regulated, with rest, sleep, food, proper sedatives and tonics, and suitable attendance to prevent accidents. To these the hospital adds the non-interference of officious friends.

SOME CLINICAL FEATURES OF BELL'S PALSY AS ILLUSTRATED BY THREE CASES.

By WILLIAM EVANS, M.D.,

Assistant Physician to the Nervous Dispensary of the University Hospital.

PARALYSIS of the portio dura of the seventh nerve is one of the most frequent of the peripheral palsies; and while it is often considered by physicians as a trivial complaint, it is especially alarming and intensely annoying to the patient. Its usually sudden onset, the marked distortion of those features in which human nature takes a particular pride, the partial disability in mastication and deglutition, the inability to close the eye, and the consequent imperfect lubrication of the conjunctiva, and the irritation caused thereby, all serve to impress the patient that something serious has happened. While it is generally possible to give a favorable prognosis in this trouble, unless there may be reasons for suspecting serious lesions of the nerve, as sometimes happens in chronic otitis, or mastoid disease, yet there is a number of cases which refuse to respond to treatment. After a few days the affected muscles begin to waste and to show the usual reactions of degeneration. This condition may continue unchanged for weeks and even months, until there will be noticed on the paralyzed side, instead of the smooth, expressionless features, the corner of the mouth slightly drawn, the palpebral fissure, which heretofore was large and round, so that it has received the technical name of lagophthamia, or hare-eye, will diminish in size, and the patient will be unable to open widely the eye. When this state of affairs becomes established the muscles may again respond to the faradic current, but the contraction will be short, quick, and easily exhausted. In other words, we have the phenomena of secondary contracture, which are often

seen in other forms of paralysis. The following represents a type of this class of cases:

S. H., female, aged thirty-nine, married, applied at the Dispensary for Nervous Diseases of the University Hospital, May 8, 1891, with facial paralysis of the right side. The attack occurred nine months before, and was ushered in with severe pain in the side of the face and behind the ear.

When she came to the dispensary the muscles of the paralyzed side were somewhat wasted, but did not show reactions of degeneration. The faradic response was slightly diminished.

After she had been under treatment about two months, it was first noticed that the mouth was drawn to the right instead of the left as at first, and that the palpebral fissure was contracted.

The reactions of the muscles were normal, but the faradic response was distinctly exaggerated. Her condition remained stationary while under treatment.

Secondary contracture has always been considered of bad omen, and the patient is informed that there is little expectation of the face ever regaining its normal functions.

In a series of ten cases recently treated at the Nervous Dispensary of the University Hospital, secondary contractures were noticed in three, and by the records of two of these cases I intend to show that this complication does not necessarily indicate a bad prognosis.

E. S., female, age eighteen, single, clerk by occupation, reported February 20, 1891, at the Dispensary, stating that two days before, on arising in the morning, she found the left side of her face paralyzed. The day before she had worked for some time before an open window. The left side of her face was perfectly smooth, the eye was wide open, she being unable to close it; the mouth was drawn to the right, and she had trouble in masticating her food. There were no evidences of middle ear disease.

Electrical examination of the muscles showed no qualitative changes. She visited the dispensary regularly for treatment by the galvanic current for two months, during which time the improvement was so decided that all inconvenience had passed away. She could close the left eye almost as well as the right, and it required very

careful inspection to ascertain which side had been paralyzed. At this time the muscles responded well to a weak galvanic current, but, unfortunately, were not tested by faradism.

She did not report again at the dispensary until October 5th, when she returned, complaining of difficulty in opening the left eye. The palpebral fissure was now much contracted, and the left angle of the mouth was slightly drawn upward. These symptoms were much more marked on smiling or laughing. The muscles showed the normal reactions, but there was some quantitative increase to faradism. Her chief complaint was the distorted appearance of her face, rather than any physical disability. A few days ago I again saw this patient. The orbicularis palpebrarum was still decidedly contracted, and the mouth was very slightly drawn to the left. The muscles of the two sides of her face responded about equally to a weak faradic current.

She had good use of the left side of the face, but could not distend the left cheek quite as perfectly as the right.

In this case we have all the objective symptoms of secondary contracture coming on after apparent recovery, but giving the patient no inconvenience except in a cosmetic point of view.

The next case shows even more strongly that secondary contracture is not always of serious import, and that the muscles under these circumstances may even regain their power sufficiently to carry on extra work, such as is required in trades like glass-blowing.

L. F., male, aged, forty-six, glass-blower, applied at the dispensary, April 11, 1890, with left-sided facial paralysis of five weeks' duration. The attack came on suddenly while at work. He complained of difficulty in mastication, the food tending to lodge between the cheek and lower jaw; total inability to distend his cheek as required in working at his trade, and pain in the left eye from conjunctival irritation. The muscles of the left side of the face failed to respond to faradism. Ear examination threw no light on the cause of the trouble. The patient was treated by the constant galvanic current; and a note made, April 28th, reports "improvement." October 7th: Improvement was decided; could close left eye almost as well as the right, but still could not distend his cheek sufficiently to blow a bottle. He

did not report at the dispensary for two weeks after the last note was made, when it was first noticed that the mouth was drawn slightly to the left side, and there was marked contracture of the orbicularis palpebrarum. The muscles at this time showed no qualitative changes, and responded well to faradism. The patient insisted that he was improving, which he frequently tested by attempts at bottle-blowing. He came regularly for treatment until November 10th, and then did not report again for five weeks, when he called to inform us, with evident gratification, that he was able again to blow a bottle. The muscles of the left side of his face still showed marked contractures.

The conclusions from a study of these cases are:

1. That secondary contracture is not an infrequent sequel to Bell's palsy.

2. That it may come on even after apparent recovery, and

3. That it may exist and the patient still possess good use, and, in some cases, extraordinary use of the affected muscles.

Stated Meeting, March 28, 1892.

The President, Dr. FRANCIS X. DERCUM, in the chair.

Dr. CHARLES W. BURR presented notes of

A CASE OF FRIEDREICH'S ATAXIA.—PATIENT EXHIBITED.

S. D., female, aged twenty-eight, single, born in Pennsylvania, admitted to the Philadelphia Home for nine months in May, 1891.

Family History.—Maternal grandmother living, aged eighty-two years, in good health. Paternal grandmother died of "old age." Maternal grandfather died of English cholera, paternal living, aged seventy-two, healthy. Mother in good health. Father killed by accident. A brother and sister living and in good health. One sister died in infancy. Careful questioning fails to reveal any nervous diseases in the family.

Personal History.—Patient is youngest child. Born at term. Labor easy. Instruments not used. Breast-fed. Never had convulsions. Menstruation began at fifteen years. No acute illness preceded present trouble.

Present Illness.—Patient's mother dates present illness from a fall which occurred when she was about eight years old. No serious injury resulted from the fall and the first symptom (staggering gait) did not appear until two years later. This difficulty in walking, with which later weakness was associated, gradually increased, until six years ago, since which time the patient has been chair-ridden. It is impossible to discover the order in which the other symptoms appeared, and the statement that staggering gait was the first may be erroneous. There have never been lancinating or other pains, crises, girdle sensation, or paræsthesias. Lateral curvature was noticed sixteen years ago. She has had no intercurrent disease. Some years ago chorea and later lateral spinal curvature were diagnosed.

Present State.—There is marked ataxia in arms and legs on movement, increased by closure of the eyes. On attempting to pick up a small object the hand waves

hither and thither, passes beyond it, is brought back and hovers over it before grasping it. The same motion is, of course, shown on touching the nose or ear, and in putting the heel of one foot on the toes of the other. On attempting to sit with the back unsupported marked static ataxia appears; the trunk, arms, and head sway to and fro, and soon she sinks down into the chair. The movements are wide, somewhat jerky, and irregular. There is no tremor, either at rest or on voluntary motion.

There is some palsy in the legs. Talipes equino-varus is present. No palsy in arms. Knee-jerk and elbow-jerk are absent and are not re-enforcible. Plantar reflex is capricious. Chin-jerk is absent. Muscle-jerk in arms and legs is absent. Abdominal reflexes slightly present. Winking reflex present.

Sensation is normal in the arms. She localizes well and responds normally to touch, pain, heat, and cold. The same is true of the legs, except that on the toes localization is quite imperfect. The position of legs and arms passively moved with the eyes shut is well recognized. Speech is characteristic. Syllables are elicited and there is quite a great deal of hesitation. There is very slight wasting in the legs, no more than can be accounted for by disease and far too little to need involvement of the anterior horns for its explanation. Lateral spinal curvature with the convexity to the right is quite marked.

Dr. Charles S. Turnbull kindly examined her eyes, and informs me that the pupils are normal in size and react well to accommodation and light. There are no fundus lesions. No nystagmus is present; but on looking at an object near by and far to one side, there is at times a very slow and wide, irregular oscillation of the eyeball.

The abdominal and thoracic organs are normal. Menstruation normal. Urine normal. Mental condition excellent. During the nine months the patient has been under observation her condition has remained unchanged.

Cases of this disease are still sufficiently infrequent to merit publication. The main point of interest in the case is entire absence of neurological inheritance. The diagnosis of lateral curvature is also worthy of note, because it is probable that if orthopædic surgeons were on the lookout for this disease many more cases would be discovered. Within the past year there have been shown me two other cases in which the same error in diagnosis had been made.

DISCUSSION.

Dr. JAMES HENDRIE LLOYD.—I have for some time felt that I should like to see a clearer differentiation made between Friedreich's ataxia and the tabetic form of syringo-myelia, for I have a suspicion that some cases of so-called Friedreich's disease are simply cases of congenital failure of development and gliomatosis of the spinal cord. Bruhl, who has studied most of the reported cases, in his recent monograph on syringo-myelia states that it most closely simulates locomotor ataxia of all diseases.

The point that I want to make is, that where the cavity in the cord involves especially the posterior roots or posterior columns and does not extend forward and involve the anterior horns, there is established the tabetic form of syringo-myelia. The possibility of this condition has not been sufficiently recognized by writers on Friedreich's disease. Friedreich's disease is a disease of development, so is syringo-myelia. For some reasons there is a failure, in both these diseases, in the proper development of some portions of the spinal cord. In syringo-myelia it is not necessary that there should always be atrophy of the anterior horns. There is no more reason why we should always have a classical array of symptoms in this condition than that we should have it in any form of spinal tumor. Syringo-myelia is only a condition of gliomatosis, a proliferation of gliomatous tissue around the central canal. I think that if we knew the whole truth we should find that many cases of so-called Friedreich's disease were cases of the tabetic form of syringo-myelia.

In my wards at the Philadelphia Hospital I have an almost typical case of locomotor ataxia in a young person of twenty-four years. This disease has been slowly progressing since the age of fourteen years.

The patient has Argyle-Robertson pupil, atrophy of the optic nerves, fulgurent pains, scoliosis, and a tendency to slight atrophy of certain muscular groups. He has analgesia and areas of anæsthesia, but no thermo-anæsthesia. Whatever the morbid anatomy, his case suggests to my mind the possibility of some association between these two conditions, and of confusion in the reports of cases.

Many of the collected cases by Dr. Griffith have not been verified by post-mortem. A certain class of con-

genital or early hereditary cases of lack of development of the spinal cord are taken, and those that have a certain set of symptoms are placed in one class under the head of Friedreich's ataxia. I do not think that it is at all certain but that if we took a broader view of these cases, some of them would be found to be included under the head of a congenital lack of development of the cord closely analagous if not identical with syringo-myelia. I have no pathological foundation for asserting this positively, except the cases reported by other observers.

In Dr. Griffith's elaborate monograph 143 cases are tabulated, among which only 12 autopsies were made. In one of these a cerebral hemorrhage was found. Meningitis was observed in 10. The lateral pyramidal tracts were sclerosed throughout their whole length in 11 cases. The anterior pyramidal tracts were sclerosed in 6 cases. In 4 cases the central canal was filled with small round cells. "Supplementary canals" were observed in some cases. In one case such a canal was situated *behind* the main tube throughout nearly the whole lumbar region. In 3 cases our of these 12 autopsies true syringo-myelia was observed, as proved by this report, in which such canals, lined by columnar epithelium or replaced by gliomatous material are said to have been found.

In view of these post-mortem findings, as collected by Dr. Griffith himself, I think I am justified in asserting that many of the reported cases of Friedreich's ataxia do not represent a system disease *sui generis*, and that many of them are probably cases of syringo-myelia.

I wish it to be understood that I have not asserted that there is no such disease as a congenital or early-developed ataxia. I have simply raised the question of the differential diagnosis between Friedreich's ataxia and syringo-myelia. The question is not altogether a clinical, but partly an anatomical one.

The PRESIDENT.—The absence of arthropathies in Friedreich's disease is another interesting point.

Dr. J. P. CROZER GRIFFITH.—I agree fully with what Dr. Lloyd said about Friedreich's ataxia being a trouble connected with the development of the cord. There seems to be no question about that. Many cases have been reported in which it has appeared to be almost a congenital condition; since as soon as the child has made efforts at walking, difficulty has been observed. The occurrence of the disease in different members of the same family also points toward a congenital family

weakness, particularly of the tissues of the posterior portion of the cord. The idea which was advanced by one of the French writers that this was not a condition of degeneration and connective-tissue growth, but a trouble with the neuroglia seems to have a great deal of truth in it, and this also would be in favor of the idea that the disease was due to a disturbance in the process of development. The idea has been advanced that the trouble is really an inherited tendency to vascular degeneration, and that as the blood supply to the posterior portion of the cord is not so great as that of the anterior portion the posterior half naturally suffers the most. In company with Dr. Burr I have been much interested in some observations relating to the condition of the cord in pernicious anæmia and in anæmia of other forms as well. These would indicate that possibly the blood supply has something to do with the development of posterior sclerosis; for the posterior portion seems to be more liable to suffer.

In typical cases of Friedreich's ataxia, as I consider Dr. Burr's case to be, there can be no difficulty in diagnosing the condition from syringo-myelia. In true Friedreich's disease a characteristic feature is that there is very little sensory disturbance. There is little or no pain. The girdle sensation is absent. The tactile sense is little affected. The muscle sense is not particularly involved. There are no arthropathies. The disease seems to be simply a progressive ataxia, spreading gradually from the lower to the upper portion of the body, and in some way the lesion does not extend above the medulla, but in some way speech is involved, and an "ataxic nystagmus," as Friedreich named it, is often present. This causes an oscillatory movement of the eyeball, which develops when the eye is fixed upon some object, particularly if to one side. The ordinary static nystagmus is rare.

There are some cases which differ from these typical cases. There have been a number such reported which I felt justified in including in a table of 145 cases which I collected and published some time ago. However, one can easily make mistakes, as I know well to my cost. A few years ago I saw, through the invitation of Dr. DaCosta, a case in which he had made the diagnosis of Friedreich's ataxia—a diagnosis in which I concurred, although the case presented some very anomalous symp-

toms. The autopsy showed that there was no lesion in the cord characteristic of the disease.

Friedreich's ataxia may teach us something in regard to the paths of conduction in the cord. This subject was brought up in a paper read by Dr. Inglis before the American Neurological Society last September. It is curious that in Friedreich's ataxia, with almost entire degeneration of the posterior columns, there should be so little disturbance of sensation, while in tabes dorsalis there should be so great disturbance. I do not understand why this should be so, unless possibly it is that sensation in the cord is conducted not in the posterior columns, but more in the border zone of Lissauer. Rütimeyer advances the theory, because in the two autopsies made by him this zone was affected, while in tabes dorsalis its involvement is one of the most constant lesions.

Another interesting matter which I do not entirely understand is that in the ataxia paraplegica of Gowers the symptoms should differ from those of Friedreich's ataxia, although the pathological appearances are almost identical.

In the paper to which I have referred I detailed the lesions found in the twelve autopsies which had been made up to that time. These lesions correspond in all important particulars. I think we are justified in saying that Friedreich's ataxia is a distinct combined systemic affection of the cord, just as much as tabes dorsalis is a systemic affection. We have no more right to deny the existence of this disease because some cases differ from the regular type, than we have to say that tabes dorsalis is not a distinct disease because cases have been observed and considered to be tabes dorsalis, and yet the autopsy has shown syphilitic meningitis.

It is true that in some of the autopsies some slight evidence of syringo-myelia existed. But it is also true that in some meningitis was present. In no case, however, do these lesions appear to have the slightest bearing upon the symptoms which had existed during life. Both can only be regarded as accidental lesions, the principal lesion on which the disease depends being a systemic degeneration of certain portions of the cord, particularly of the posterior column and lateral tract.

Dr. D. D. STEWART by Dr. M. H. BOCHROCH presented for examination by the Society a

PROBABLE CASE OF SYRINGO-MYELIA.

Dr. CHARLES K. MILLS and Dr. J. B. DEAVER presented

SPECIMENS FROM A CASE OF TUMOR, PROBABLY GLIOMATOUS, OF THE CEREBELLUM, OBLONGATA, AND PONS, WITH HYDROCEPHALUS AND HYDRORACHIS.

Dr. AMELIA GILMORE read a paper on

INSANITY OF THE PUERPERIUM. (See page 94.)

DISCUSSION.

Dr. JAMES HENDRIE LLOYD.—One point in the etiology of insanity following labor which has always been of interest to me, is what is the proportion of cases in which there is a septic element. I think that sepsis is an important element in these cases, I am not prepared with figures, although on a former occasion I did go over this subject carefully. I think it was Clark who found, in studying a series of cases, that almost fifty per cent. exhibited some evidence of involvement of the womb or its surroundings—a true septic element. I do not mean to assert that this is so in all cases, but I believe that it is so in a certain proportion. In one case of insanity at the puerperium, in which I was called in consultation, there was well exhibited the conjoined effect of heredity, over-child bearing, anæmia, and sepsis. This woman had borne nine children in rapid succession, was overburdened with household cares, was anæmic, and had suffered from melancholic depression. After a troublesome labor she went into a condition of true sepsis, with elevation of temperature, a distended belly, metritis, cellulitis, and a typhoid tongue. This was her condition when I saw her four weeks after labor. She was sent to the Pennsylvania Hospital for the Insane, where she remained two years before she completely recovered. I think that the sepsis was a strong element in this case. I think, indeed, that many cases of confusional insanity or acute delirium support the view which I have before

expressed that some of these cases are infectious in their nature.

The PRESIDENT.—Dr. Gilmore has alluded to the profound nervous exhaustion present in these cases. It seems to me that just for this reason they are particularly adapted to the rest cure. I am satisfied that the time devoted to treatment can be materially reduced, and, further, that cases otherwise hopeless can be cured by this means.

Dr. AMELIA GILMORE.—In regard to septicæmia, we find much less of it now than formerly. In many of the cases coming from the outside we do not know whether or not there has been a septic element. In the cases delivered in the hospital there is no septicæmia. I have seen no case which I could refer to sepsis.

In the treatment of these cases no regular method is adopted, but each case is studied by itself. The general treatment is that of rest, baths, special attention to diet, and special tonics and sedatives, as they are indicated.

Dr. WILLIAM EVANS read a paper entitled

SOME CLINICAL FEATURES OF SECONDARY CONTRACTURE IN BELL'S PALSY, AS ILLUSTRATED BY THREE CASES. (See p. 105.)

A Memoir of Dr. ANDREW J. PARKER was read by the President. A committee was appointed to prepare a minute on the death of Dr. Parker.

Stated Meeting, April 25, 1892.

Dr. CHARLES K. MILLS, in the Chair.

Dr. JOHN K. MITCHELL and Dr. G. E. DE SCHWEINITZ presented a paper entitled

"SOME CASES OF HYSTERIA WITH A STUDY OF THE DISTURBANCES OF GENERAL AND SPECIAL SENSATION."

They drew the following conclusions:

1. Achromatopsia, as we have already stated in a paper entitled, "Hysterical Anæsthesia with a Study of the Fields of Vision" (The American Journal of the Medical Sciences, November, 1889) apparently is not present in the American cases, certainly not as it has been described by Galezowski and other French observers.

2. Reversal of the normal sequence of the colors, so that red is the largest field, usually is present when there is anæsthesia; but disturbance of the color-sense and anæsthesia do not necessarily belong to each other, because we have examined at least two cases of universal anæsthesia without change in the color fields.

3. The green field, relatively at least, is more often and more decidedly contracted than the other color fields.

4. In the difficult distinction between certain types of neurasthenia and hysteria, the presence of disturbance in the color-sense, and especially the reversal of the sequence of the colors, is of diagnostic import, and yet its absence is of little meaning, because we have not found it in many typical cases of hysteria.

5. It is possible that in the rare cases of hysterical hemi-hyperæsthesia it will be found that the colors are more acutely appreciated than is normal, and that the color fields are correspondingly enlarged.

6. The violence of hysterical manifestations bears no relation to the disturbance of the color-sense or the color fields.

7. The following changes, so far as the field of vision is concerned, are likely to be present in cases of hysteria:

(a) Simple contraction of the color fields with unaffected form fields.

(b) Contraction of both form and color fields, the green field being relatively more contracted than the other color fields.

(c) Partial or complete reversal of the normal sequence in which the colors are appreciated, most commonly that variety in which the red field is greater in extent than the other fields. Under these circumstances the color fields may be normal in extent, sometimes even greater than is normal, or there may be an associated contraction of the color fields.

(d) Unusual obscurations of portions of the fields of vision, for example, in the form of a hemianopsia, or greater contraction of the fields on one side than on the other, the greater contraction usually being found on the same side with the anæsthesia.

8. A further study in the relation of the changes of sensibility to changes in the color fields will be the subject of a future communication.

DISCUSSION.

Dr. JOHN K. MITCHELL.—It perhaps may be worth while to mention that in the most pronounced cases of hysteria reported here, there is no alteration of the visual fields with the exception of some slight contraction. This is the girl from Pottsville who first came under observation in 1883 with a hysterical knee, and subsequently went into a trance state which continued for four months. This case has continued nearly ten years, and during this time she has not been free from hysterical manifestations, and yet there is little change in the fields of vision.

Dr. JOSEPH LEIDY, JR.—I would ask whether these variations in the ocular fields are found during the course of other diseases which do not present gross retinal changes. The members may have seen in the International Clinics the report of a case of malarial paralysis which was in the Pennsylvania Hospital under the care of Dr. Da Costa. That man presented during the treatment hemianopsia of the bi-temporal variety. The condition was so unusual that the patient was of course carefully examined. The malarial organisms of Laveran were found in the blood. Under treatment with quinine the hemianopsia disappeared nari passu with the dis-

appearance of the malarial changes. In taking that man's fields for color, I found that the red was much the largest. It may be that this was a case of hysterical hemianopsia, for the fundus presented nothing abnormal which suggested organic disease.

Dr. GUY HINSDALE.—I would ask Dr. de Schweinitz whether or not from his studies in hysterical ophthalmoscopy, he can state what percentage of hysterical cases will show this reversal of the red and green fields?

Dr. DE SCHWEINITZ.—In reply to Dr. Leidy I would say that the changes which are found in the fields of vision in hysterical patients are often similar to those which occur with organic disease, just as in other respects hysteria in its various manifestations, mimics the symptoms of constitutional maladies. In all forms of optic nerve atrophy, and in various diseases with insufficiency of retinal perception, there are changes both in the form and color fields, usually in the form of concentric contraction. In optic nerve atrophy the perception of red and green is the first to be lost—generally green first, and then red. If the observations reported to-night are to be taken as samples of those which occur in general in hysteria, the reverse is true, so far as red is concerned, because it is probably the last of the colors to lose its power to make an impression, although green, as has been pointed out, relatively at least, presents the most contracted field. The mere crossing of the color lines would not be a safe symptom on which to base a diagnosis of hysteria. It is also seen in various forms of optic nerve atrophy, and sometimes in normal individuals. No doubt charts like these might be obtained as the result of imperfect examination. When, however, the eye-grounds being normal there is an absence of symptoms pointing to organic disease, and there is a persistent reversal in the normal sequence in which the colors are appreciated, so that the red field is larger than the blue field, and this condition obtains after repeated examinations, it is a circumstance very suggestive of hysteria. Certainly, if we may judge from one or two of our cases, its presence is of diagnostic import, even if, as we carefully point out in our conclusions, its absence is of little moment, because we have not been able to find it in many typical cases of hysteria. In a given case of hysteria one cannot foretell what the color field will be, any more than it is possible to prophesy what will be the next hysterical manifestation. In two of the most violent

cases which we have described, one lasting ten years and another of violent convulsive type, probably implanted upon an organic lesion, the changes in the color fields were the least marked of any of these reported. In regard to Dr. Leidy's case of hemianopsia, I would say that there have been reported a few cases of bi-temporal hemianopsia due to malaria; one by Drs. Harlan and Leidy, and another by a German observer. No doubt malaria is capable of producing hemianopsia. The fact, however, that the red field in Dr. Leidy's case occupied the greatest extent, seems to me to be a suspicious sign, although I can see no reason why there might not be a combination of malaria and hysteria. We have not found a single case of true achromatopsia, as has been recorded in France, provided we omit certain cases of ordinary hysterical amblyopia, which are not uncommon; but in other respects our observations are closely in accord with those which have been made in Charcot's wards in Paris. I am unable to answer Dr. Hinsdale's question in reference to the percentage of cases in which these changes are found, for the simple reason, as has before been pointed out, that it is impossible to predict what relation the hysterical manifestation will have to the character of the color field and the sequence in which the colors are appreciated.

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